Clinical Medicine & Surgery

THE AMERICAN JOURNAL OF

CLINICAL MEDICINE

R
11
C55
v.27
no.1

314816
18. 4. 35

JANUARY ANNUAL PROGRESS NUMBER

WASSERMANN TEST - - - $5.00
AUTOGENOUS VACCINES - - 5.00
TISSUE DIAGNOSIS - - - - 5.00
All other laboratory tests at reasonable rates.

ANTI-RABIC VIRUS *(Harris)* - - $25.00

MERCURIAL (*Gray*) OIL - - $1.50
Fee list and containers, with directions, sent gratis on request

National Pathological Laboratories
Inc.

Each institution is in charge of a highly trained and thoroughly competent medical director. Every device known to modern scientific methods is utilized to faciliate prompt reports and give the assurance of accuracy to the results obtained.

CHICAGO 5 So. Wabash Ave. | NEW YORK 18 East 41st Street | BROOKLYN Chamber of Commerce Bldg. | ST. LOUIS University Club Bldg.

PRIMARILY

ELIXIR LACTOPEPTINE acts as a prompt *and* efficient **digestive aid** throughout the alimentary tract.
But as a **vehicle** it occupies a place *of* equal distinction.
For when the stomach rebels *and* will no longer tolerate **KI** or other harsh drug
ELIXIR LACTOPEPTINE overcomes the difficulty *and* makes possible a continuation *of* treatment.
ELIXIR LACTOPEPTINE renders disagreeable *and* irritant drugs
PLEASING to the eye—**ACCEPTABLE** to the palate
GRATEFUL to the stomach.

Lactopeptine

The Original Multiple Enzyme Product
The New York Pharmacal Association
YONKERS, N. Y.

THOROUGH DISINFECTION

is now a necessity. Special precaution should be taken to protect your health.

STOP THE SPREAD OF INFLUENZA germs now prevalent.

Create a clean, healthy atmosphere by the constant and daily use of the reliable

Platt's Chlorides

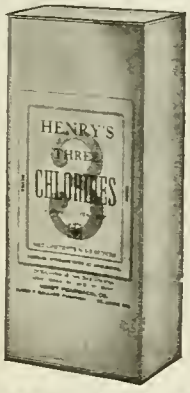
The Odorless Disinfectant

(Trade-Mark Registered)

Sold everywhere in two sizes.

Is absolutely odorless, yet strong and effective.

Write for sample and booklet to the manufacturers, HENRY B. PLATT CO., 41 Cliff St. N. Y.



THREE CHLORIDES (HENRY'S)

LIQUOR-FERRISENIC-12 oz. Bottles, Price $1.50

Indicated in anemia and bodily weakness especially in the treatment of puny children, convalescing adults or the aged; also for girls at the age of puberty, women at the menopause and wasting diseases and debility.

SPECIAL NOTICE TO PHYSICIANS.

We will send an Original Bottle, $1.50 size, *Three Chlorides,* to any Physician who will send us 30c. Express Charges on same. Send Coin, Stamps, Express or Money Order.

WRITE FOR BOOKLET

Henry Pharmacal Co., *121 Vine Street ST. LOUIS, MO.*

Chronic Invalidism is a very frequent sequel of Influenza.

Fellows' Syrup of the Hypophosphites

supplies the indispensable mineral salts required by the system together with the two potent dynamic agents, strychnine and quinine. It accelerates convalescence and restores strength and vigor

The Standard Tonic for Over Half a Century"

SAMPLES AND LITERATURE UPON REQUEST

FELLOWS MEDICAL MANFG. CO., Inc.

26 Christopher Street New York

The American Journal of Clinical Medicine

A MONTHLY JOURNAL
DEVOTED TO ACCURACY, DEPENDABILITY AND HONESTY IN EVERY DEPARTMENT OF MEDICINE AND TO THE SAFEGUARDING OF THE DOCTOR

GENERAL EDITORIAL STAFF:

W. C. ABBOTT A. S. BURDICK RICHARD SLEE H. J. ACHARD
WM. RITTENHOUSE

PUBLISHED BY THE AMERICAN JOURNAL OF CLINICAL MEDICINE, Inc.

ENTERED AS SECOND-CLASS MATTER MARCH 31, 1906, AT THE POST OFFICE AT CHICAGO, ILL., UNDER ACT OF MARCH 3, 1879.

Subscription Rates.—To any part of the United States, Canada and Mexico, $3.00 per year, postage free; single copies thirty cents; to all other countries an additional charge of $1.00 is made for postage. N. B.—Make all checks and remittances for subscriptions and renewals payable to THE AMERICAN JOURNAL OF CLINICAL MEDICINE, adding 10 cents for exchange. **Two years for five dollars.**

Address Changes.—Notify us promptly of any change of address mentioning both old and new addresses. We cannot hold ourselves responsible for copies of CLINICAL MEDICINE sent to former addresses, unless we are notified as above. If you fail to receive your copies of CLINICAL MEDICINE notify us at once, and we will supply you if we can. Complaints covering more than three months usually cannot be honored.

Discontinuance and Renewals.—According to Post-Office regulations, subscriptions must be expressly renewed within one year of the term for which they are paid. When this paragraph is marked and the journal comes to you in an "unusual wrapper," it means that your subscription expires with that issue and is a request for you to send in your renewal at once. Renewal blank is enclosed for this purpose. **Kindly always renew promptly.**

Warning.—Pay no money to an agent unless he presents a letter showing authority for making collection.

Address.—THE AMERICAN JOURNAL OF CLINICAL MEDICINE, 4737 Ravenswood Ave., Chicago, Ill.

The Indian Alkoloidal Company, sole agents for India, Burma and Ceylon.

Vol. 27, No. 1 **January, 1920**

EDITORIAL DEPARTMENT

A Happy New Year ... 1
The Management of Influenza and Pneumonia ... 2
Our Friends, The Eclectics ... 2
Sentimental Journeys ... 5
Active-Principle Therapeutics ... 5
A Period of Grace ... 6
A New Idea in Sanatorium Operation ... 6
CLINICAL MEDICINE For Your Friends ... 7
Carelessness the Great American Sin ... 7
Red Cross Stamps ... 8
Physicians' Finances ... 8

LEADING ARTICLES

French Influence Upon Pharmacology and Toxicology. Pouchet ... 11
Some Things the Civil Surgeon Has Learned from the Surgery of War. Green ... 16
Recent Advances in Surgery. Morf ... 17
The Scope of Antigen (Vaccine) Therapy. Crofton ... 21
Classification of Rheumatism and Treatment of Each Type. Atkinson ... 23
Pyorrhea—Its Causes and Cure. Ryan ... 28
Rectal Hemorrhage. Drueck ... 33
After Thirty Years—XXI. Rittenhouse ... 35
The Function of the Thyroid Gland. Bowling ... 38

WHAT OTHERS ARE DOING

Morphine and Hyoscine in Anesthesia ... 41
Facial Warts ... 43
Inflammation and Suppuration: Magnesium Sulphate ... 44
Management of War Hysteria ... 44

LET'S TALK IT OVER

Medical Giants in America ... 45
Another Theory of the Causation of Sex ... 47
What I Know About An Automobile ... 48
A Good Opening for a Prescribing Physician ... 49
Moving Picture Shows in the Service of the Social-Hygiene Campaign ... 49
Disease ... 50
Opium Harmful in Pneumonia ... 50
The Value of Fasting ... 51
Letters from France.—XVI ... 52
Hard Work ... 54
Opportunities That We Are Missing ... 55
Looting the Loot ... 58
Chlorazene Internally ... 61
Chlorazene Internally Again ... 61
JUST AMONG FRIENDS ... 63
AMONG THE BOOKS ... 67
QUERIES ... 71

SPECIAL ARTICLES FOR JANUARY

French Influence Upon Pharmacology and Toxicology ... POUCHET
The Clean-Out Principle Applied To Roentgenology ... O'HARA
Smallpox Conquered by Calcium Sulphide ... GRAY
The Climacteric-Involution Period and Its Psychoses ... DUVAL
Notes on the Treatment of Infectious Diseases ... LERCH

"Just What a Ligature Should Be"

is the verdict of surgeons who have used Armour's Surgical Catgut Ligatures

THE real test of catgut is in its behavior after being buried in living tissue. The surgeon wants a ligature that is strong enough to hold, that absorbs uniformly and that is uncontaminated. What make should be demanded? **Armour's**, because the Armour Ligatures are prepared from selected lamb's gut which is sterilized before and after drying, before and after sealing hermetically in tubes; lamb's gut that is manipulated from start to finish by men who know that it is surgical sutures they are handling.

LABORATORY PRODUCTS

It is the effort of these men to produce the best catgut ligatures ever put out, i. e., a strong, smooth, supple and thoroughly sterile suture.

Every lot of ligatures made in the Armour Laboratory is tested bacteriologically and no ligature is released until the bacteriologist has pronounced it **sterile.**

Plain and chromic 60 inch sizes 000 to 4 inclusive. Emergency lengths (20 inch).

ARMOUR AND COMPANY

CHICAGO

Index to Advertisers

PAGE

Alkalol Co., The....3rd Cover
Allison Co., W. D....4th Page Insert
Aloe & Co., A. S....15th Page Insert
Ambulatory Pneumatic Splint Co....4th Page Insert
American Projecting Co. 30
American Surgical Specialties Co....11th Page Insert
Anasarcin Chemical Co 35
Anglo-French Drug Co 15
Antidolar Mfg. Co....36, 50, 51
Arlington Chemical Co., The....2nd Cover
Armour & Co 3
Astier Laboratories 50
Balsamea Co., The....14th page Insert
Battle & Co 42
Bauer Chemical Co., The 37
Borcherdt Malt Extract Co....4th page Insert
Borden's Condensed Milk Co 42
Bovinine Co. 37
Bristol-Myers Co. 51
Breon & Co., George A 15
Burdick Cabinet Co 26
Burnham Soluble Iodine Co 47
Burt Co., Philo....16th page Insert
Business Opportunities 36, 38
Campho-Phenique Co. 26
Carnick Co., G. W....5th page Insert
Century National Chemical Co 49
Clinical Film Co 46
Cocroft, Susanna ....
Columbus Pharmacal Co., The 52
Combs Chemical Co 34
Consolidated Ptg. & Pub. Co 36
Cook & Co., George C 29
Daniel, John D 41
Delson Chemical Co., The 52
Dentinol & Pyorrhocide Co., The 47
Denver Chemical Mfg. Co....4th Cover
Dionol Co., The 20
Dios-Chemical Co 13
Drug Products Co., The 46
Empire Mfg. Co 6
Etna Chemical Co....29, 47
Eureka Co., The 51
Fellows Medical Mfg. Co 1
Fleischmann Co., The 17
Fougera & Co., E....13th page Insert
Fourgera & Co., E....14th page Insert
French Lick Springs Hotel Co 49
Galen Laboratories ....13th page Insert
Hansen's Labatory, Chr....9th page Insert
Harrower Laboratory 53
Heyl Laboratories ....12th page Insert
Henry Pharmacal Co 1
Hillside Chemical Co 27
Hollister-Wilson Laboratories ....3rd Cover
Hoosier Mercantile Agency 42
Horlick's Malted Milk Co 51
Huston Bros. 22
Illinois Post Grad. Tr. Sch. for Nurses 44
Iodofume Co., The....6th page Insert
Iodum-Miller Co., The 36
Johnson & Johnson 5
Katharmon Chemical Co 8
Kriebel & Co 41
Lavoris Chemical Co....4th Cover
Lister Brothers ....12th page Insert
Luvein Laboratories 35
Maltbie Chemical Co., The 24
Marks, A. A 8
McIntosh Battery & Optical Co 50
McKesson & Robbins....7th page Insert
Medical Echo, The 36
Medical Herald, The 46
Mellin's Food Co 50
Merck & Co 50
Merrell Co., The Wm. S 16
Micajah & Co....6th page Insert
Mudlavia 38
Mulford Co., H. K 48
New York Intravenous Laboratory....8th page Insert
New York Pharmacal Co....2nd cover
New York Pharmaceutical Co 13
News Notes 18
North Shore Health Resort 51
Norwich Pharmacal Co 9
Nystrom & Co., A. J....9th page Insert
Oakland Chemical Co 23
O'Sullivan Rubber Co 30
Oxford Retreat 44
Parke, Davis & Co 7
Parmele Pharmacal Co....2nd cover
Pepsodent Co. 19
Pettey & Wallace Sanitarium 44
Pines, The 44
Platt, Henry B 1
Plessner Co., The Paul 41
Pneumo-Phthysine Chemical Co 39
Pollard, M. D. John....6th page Insert
Pond's Extract Co 32
Postum Cereal Co 21
Purdue Frederick Co., The 10
Quaker Oats Co., The 43
Quayle M. D., Chas. H 36
Ralph Sanitarium 42
Reed & Carnrick 16
Regent Drug Co 32
Riedel & Co., Inc....15th page Insert
Robins Co., A. H 18
S. S. Products Co., The 52
Schering & Glatz 10
Scott Mfg. Co....4th page Insert
Sherman, M. D., G. H....9th page Insert
Smith, Martin H., & Co....33, 52
Smith, Kline & French Co....
Standard Oil Co.—Indiana 31
Standard Oil Co. of New Jersey 25
Sterling Pain Relieving Lamp Co....16th page Insert
Storm, M. D., Katherine L 34
Tetra Co., The 51
Thoro Corporation ....3rd page Insert
Tilden Co., The 51
Ultmo Physical Appliance Co....12th page Insert
University of Chicago Press, The....12th page Insert
Vass Chemical Co 28
Welch Grape Juice Co 11
Westerfield Pharmacal Co., The 47
White, M. D., George Starr 51
White, M. D., Mark 51
Willows, The 41
Woodlawn 36
Year Book Publishers....1st page Insert

Hand Disinfection

can be easily and conveniently accomplished by the use of

SYNOL SOAP

This efficient liquid soap enables the physician and surgeon to cleanse and disinfect the hands with gratifying freedom from the irritating effects of caustic soaps and antiseptics. It is particularly serviceable to those who have to cleanse the hands many times each day. Invaluable in the office, operating room and sick chamber.

ANTISEPTIC—
CLEANSING—
DEODORANT

Johnson & Johnson

New Brunswick, N. J. U. S. A.

So many cases of

Pruritus, Chafings, and Irritations

are relieved by applying

K-Y Lubricating Jelly

that we feel we owe it to our patrons to direct their attention to the usefulness of this product as a local application, *as well as* for surgical lubrication.

No claim is made that K-Y Lubricating Jelly will act with equal efficiency in every case; but you will secure such excellent results in the majority of instances that we believe you will continue its use as a matter of course.

NO GREASE TO SOIL THE CLOTHING!

Collapsible tubes, 25c. Samples on request.

Johnson & Johnson
NEW BRUNSWICK, N. J., U. S. A.

"Rheumatic" Pain

Is there anything more satisfyingly warming to a painful rheumatic joint than a liberal application of K-Y ANALGESIC, followed by covering the part to keep in the warmth?

K-Y ANALGESIC
"A POWER FOR COMFORT"

DOESN'T BLISTER
DOESN'T SOIL
DOES WASH OFF

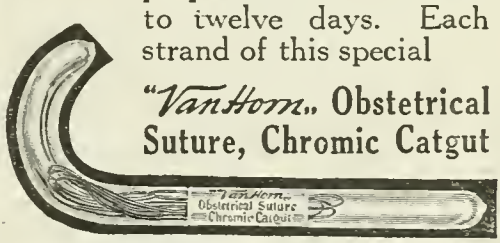
NOT A PARTICLE OF GREASE

Druggists, collapsible tubes, 50c.
Samples and literature.

Johnson & Johnson
NEW BRUNSWICK, N. J., U. S. A.

IN THAT CONFINEMENT TEAR

If you favor immediate repair, use our especially chromicized catgut prepared to hold seven to twelve days. Each strand of this special

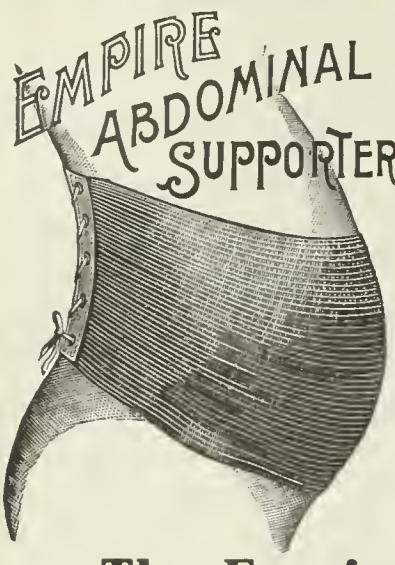


"VanHorn" Obstetrical Suture, Chromic Catgut

is threaded on a suitable needle, ready for instant use. Indispensable for your surgical bag. One tube in each box. Price, 25 cents each; $3.00 per dozen tubes. No samples.

OBTAINABLE FROM YOUR DEALER

Johnson & Johnson
NEW BRUNSWICK, N. J., U. S. A.



Superior to all others for the following reasons:

1st. It adapts itself to every movement of the body, giving strong and even support.

2nd. It produces warmth without irritation or sweating, as it is perfectly ventilated.

3rd. In pregnancy, corpulency, tumors or other cases of enlargement of abdomen, it supports weight of body from the backbone, relieving the sinews of their overwork.

4th. Its easy appliance (lace and draw on over head or feet).

5th. It is cheap, durable; it can be washed when soiled, proper care being taken to cleanse in lukewarm water and dry in shade.

In ordering give largest measure of the abdomen.

PRICES

8 inches wide			$2.50
11 " "			3.00
8 " "	Silk Finish		3.50
11 " "	" "		4.50
8 " "	Double Rubber		3.00
10 " "	" "		3.50
12 " "	" "		4.00

The Empire Elastic Bandage

Specially Adapted for Varicose Veins

We invite the attention of the medical and surgical profession to the various merits combined in our bandages.

1st. **Its Porosity.**—The greatest in the "EMPIRE." It never causes itching, rash or ulceration under the bandage.

2nd. **Its Elasticity,** which will enable the surgeon or nurse to put it on at any required tension, and which will follow a swelling up or down, as the case may be, a feature unknown to any other bandage.

3rd. **Its Absorbent Properties.**—Greatest in the Empire.

4th. **Its Easy Application** to any part of the body, not being necessary to fold over, as with other bandages, as it follows itself with equal uniformity around any part of the abdomen.

5th. **Its Self-Holding Qualities.**—No bother with pins, needles and thread, or string, so tiresome to surgeons, as simply tucking the end under the last fold insures its permanent stay until its removal for purpose of cleanliness.

6th. The only bandage that is **Superior to the Elastic Stocking** for varicose veins.

Send $1 for 3-inch by 5-yard bandage on approval

The Empire Umbilical Truss

Is an Abdominal Supporter with Button Inserted at Navel

Is made of the same material and possesses the same merits as the Empire Elastic Bandage and Empire Abdominal Supporters, and it is pronounced by all who have seen it to be the best in the world. **All our goods are sent free by mail upon receipt of price, and money refunded if not satisfactory.**

PRICES

Infant, hard pad	$1.25	Infant, soft pad	$1.50
Children, hard pad	2.50	Children, soft pad	3.00
Adult, hard pad	4.50	Adult, soft pad	5.00

ALL ABOVE PRICES ARE NET TO PHYSICIANS

MANUFACTURED BY

EMPIRE MFG. CO., 7 Spring St., Lockport, N. Y., U.S.A.

Influenza and Pneumonia

PROPHYLAXIS: Dr. E. C. Rosenow, of the Mayo Clinic, read a paper before the American Medical Association at the last annual meeting in which he reported on the use of a prophylactic vaccine in the influenza epidemic of 1918–1919. There was a total of 100,000 cases, with 300,000 controls. He asserted that the incidence of the disease was three times as great in the unvaccinated persons as in the vaccinated, and the mortality five times as great.

Parke, Davis & Company's Influenza-Pneumonia Vaccine is prepared in accordance with the original formula and method of Dr. Rosenow. It is administered in three injections, at intervals of six or seven days.

Influenza-Pneumonia Vaccine
(Prophylactic)

Bio. 632. Three bulbs in a package.
Bio 633. Three syringes in a package.
Bio 634. Rubber stoppered vials containing five mils.
Bio. 635. Rubber-stoppered vials containing twenty mils.

TREATMENT: Physicians who used Pneumonia Phylacogen last winter as a routine measure in the treatment of influenza gave an initial injection of 16 minims. The second day the dose was increased to 32 minims, the third day to 48 minims, and so on until convalescence was established.

When pneumonia had already developed, 16 minims of Pneumonia Phylacogen was administered immediately. Twelve hours later 32 minims was injected, and the dose was gradually increased every twelve hours until the critical period had been passed.

Pneumonia Phylacogen

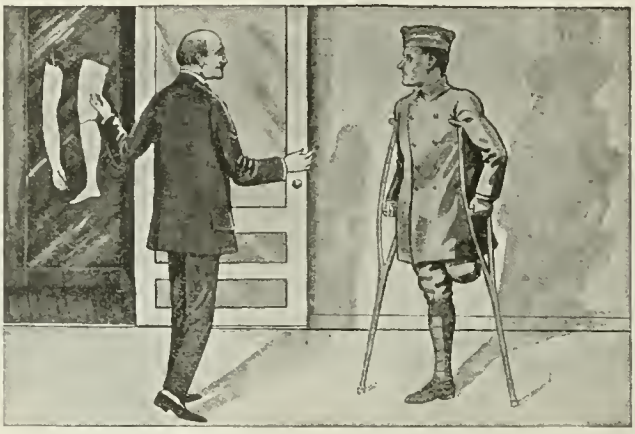
Bio 605. Bulbs of ten mils, one in a package.
Bio 607. Bulbs of one mil, five in a package.

Send for our booklet, "Prophylaxis and Treatment of Influenzal Pneumonia."

Parke, Davis & Company

DETROIT

4 U. S. Wars and Marks Has Re-membered Them



Mr. Smith: "Can you remember me?"
Mr. Marks: "Yes, step in this room."

The establishment of A. A. Marks is the oldest in the world devoted exclusively to the manufacture of Artificial Limbs. It has produced more complete artificial legs and arms than any other concern. It has made limbs for soldiers of four U. S. wars as follows: Mexican War, 1847; Civil War, 1861-1866; Spanish War, 1898, and the World War, 1917-1918. The establishmeot atands today at the head of the profession in improvements, magnitude of work, excellence of products and good faith. Send for Manual of Artificial Limbs. The book contains 384 pages, illustrated by 674 cuts, and a thousand testimonials. Instructions are given how to take measurements and obtain artificial limbs without leaving home.

A. A. MARKS

696 to 702 Broadway
NEW YORK, U. S. A.

DEBILITATED WOMEN IN PREGNANCY

The difficulties experienced by debilitated women during gestation are best met by rest, suitable diet and a blood-maker such as

The value of Cord. Ext. Ol. Morrhuae Comp. (Hagee) in this state lies in its definite power to make blood, add strength to the tissues and store up energy. And it is extremely palatable, too.

EACH FLUID OUNCE OF HAGEE'S CORDIAL OF THE EXTRACT OF COD LIVER OIL COMPOUND CONTAINS THE EXTRACT OBTAINABLE FROM ONE-THIRD FLUID OUNCE OF COD LIVER OIL (THE FATTY PORTION BEING ELIMINATED) 6 GRAINS CALCIUM HYPOPHOSPHITE, 3 GRAINS SODIUM HYPOPHOSPHITE, WITH GLYCERIN AND AROMATICS.

EASILY ASSIMILATED — *Supplied in sixteen ounce bottles only.* — *Dispensed by all druggists* — free from Grease and the Taste of Fish

Katharmon Chemical Co., St. Louis, Mo.

KATHARMON is unsurpassed in the hygiene of the mouth and teeth.

KATHARMON CHEMICAL CO. ST. LOUIS, MO.

KATHARMON represents in combination Hydrastis Canadensis, Thymus Vulgaris, Mentha Arvensis, Phytolacca Decandra, 10½ grains Acid Borosalicylic. 24 grains Sodium Pyroborate to each fluid ounce of Pure Distilled Extract of Witch Hazel.

Chicago

Kansas City

New York

Branches of
The House That Norwich Built
established and maintained
with complete stocks of
standardized pharmaceuticals for the convenience of the profession

The Norwich Pharmacal Co.
Executive Office and Laboratories
Norwich, New York

"The House That Norwich Built" Series

The Results You Seek

are certain, and sure to follow when you prescribe

Gray's Glycerine Tonic Comp.

These results, of course, are **the relief of weakness and debility, the restoration of strength and vitality** and **the general up-building of your patient.**

You do not expect miracles, or the achievement of the impossible. You do not look on Gray's Tonic as a panacea.

But you **do** expect your patient's appetite to increase, his digestion to improve, his strength to return, and his whole condition to show a real and substantial gain, when you put him on Gray's Glycerine Tonic Comp.

These are the results you seek—**and these are the results you get!**

The thousands of medical men who have used Gray's Tonic during and after influenza, this past winter know how true this is.

The Purdue Frederick Company

135 Christopher Street New York City

When a patient comes to you with that rather vague complaint

"Rheumatism"

What he wants first, and wants quick, is Relief.

Relief from the Pain, the Inflammation and the Congestion.

Relief from the Soreness and Stiffness of Limbs.

This accomplished, he will be ready and eager for the course of general treatment mapped out by you for his particular type of Rheumatism.

ATOPHAN seldom fails to relieve, and in the acute forms, it is often all that is needed.

Its freedom from untoward by-effects on the heart, the kidneys and the gastro-intestinal tract is as freely and generally conceded as its superior efficacy.

U. S. A.-Made and Available Everywhere

Literature and Information from

SCHERING & GLATZ, Inc., 150 Maiden Lane, New York

Welch's Grapelade
a pure grape spread

LIKE Welch's Grape Juice, Grapelade has all the richness and purity of choicest grapes. For this reason it is recommended by physicians and dietitians—and welcomed by patients.

Grapelade is "fruit-food"—"Honey of grapes"—smooth, purple, tart-sweet and pure. No seeds, no skins, and the acid crystals are removed by our patented process. Only pure sugar is added to the goodness of the fruit.

As a spread on toast, the delicate fresh grape flavor of Grapelade is tempting to invalids—and its richness is wholesome and nourishing.

The Welch Grape Juice Company, Westfield, N.Y.

Order it by name--"A-P"

ABBOTT'S PROCAINE A-P FOR LOCAL ANESTHESIA

The Local Anesthetic of the Hour!

The full anesthetic action of Procaine, accepted as the best local known to science, plus the hemostatic and anesthesia-prolonging properties of the suprarenal (adrenal) gland extract is best presented in this combination of Procaine and Adrenalin (natural). For short, just call it "A-P" and order by this name.

Procaine (Abbott) while equally as obtundent as cocaine, is about seven times less toxic. It has the same efficiency as cocaine in obtunding peripheral nerve endings or sensory and motor fibres of nerve trunks.

A-P, in general practice, is available for local anesthesia by application to mucous surfaces, endermic, subcutaneous and edematous infiltration, direct and perineural nerve blocking, pervertebral, sacral and spinal anesthesia. Just the thing for ophthalmic, rhino-laryngologic and dental anesthesia.

A-P as a local anesthesia is safe, rapid in onset, and enduring in effect. Booklet giving indications and technic of its use will gladly be sent upon request.

A-P No. 1 { Procaine, gr. 1/3 (Gm. 0.02)
Adrenalin, gr. 1/2500 (Gm. 0.00002)
Sodium Chloride to make isotonic solution.

A-P No. 2 { Procaine, gr. 1/3 (Gm. 0.02)
Adrenalin, gr. 1/1500 (Gm. 0.00004)
Sodium Chloride to make isotonic solution.

Above, in tubes of 20 tablets, packed 10 tubes to the box.
Unless otherwise specified A-P No. 1 will be sent.
Also Procaine without Adrenalin, H. T., gr. 1/3, gr. 3/4, also grs. 3.
Ampules—Procaine gr. 1/3 with Adrenalin gr. 1/1600. In boxes of 12, 1 mil ampules.

Write for Complete List of Packages and Prices

THE ABBOTT LABORATORIES

Home Office and Laboratories, Dept. 95, Chicago, Ill.

New York Seattle San Francisco Los Angeles Toronto Bombay

The problem raised by the question—What will the after effects be?—finds its solution in

NEUROSINE

The Safe Soporific

Wherever the effect of a hypnotic-sedative is desirable but great caution in its use necessary, Neurosine is pre-eminently the qualified remedy.

FROM PUBERTY TO MENOPAUSE

THROUGH this period most women suffer from uterine neurosis, and as Godell so aptly describes it, "the intangible, imponderable, invisible pelvic pains of neurotic women."

HVC

Anticipated monthly attacks of Dysmenorrhea, the exhausting effects of Menorrhagia, and the nervous symptoms of early pregnancy call for the administration of **HAYDEN'S VIBURNUM COMPOUND**, presenting its well-known antispasmodic and calmative action as a preventive and as a treatment in neurosis.

It should be given in teaspoonful doses, three times a day, administered in hot water. Literature, formula and samples upon request.

NEW YORK PHARMACEUTICAL COMPANY
BEDFORD SPRINGS, BEDFORD, MASS.

NEW and RENEWAL ORDER BLANK

The American Journal of Clinical Medicine

The Price is Advancing

Send your order in today

EITHER OF THESE PICTURES—FREE

TAKE YOUR CHOICE

Actual size 11x14 inches

CLINICAL MEDICINE is the biggest bargain in the medical journal field for two dollars a year. You still have a chance to get in your new or renewing subscription at the old price of $2.00 a year and secure FREE a splendid photogravure of General Pershing or the late Theodore Roosevelt.

If you want both pictures send in $4.00 covering a two-year subscription.

There is no medical journal more interesting or practical than CLINICAL MEDICINE.

1920 will be the best year in our history of 25 years. This may be your LAST CHANCE—

Act Now!—Today!—Use the Coupon

Actual size 11x14 inches

The American Journal of Clinical Medicine,
4757 Ravenswood Ave., Chicago.

Enclosed find $2.00 for which please enter my new / renewal subscription to CLINICAL MEDICINE for one year. Please send receipt and Free copy of Pershing / Roosevelt picture.

Dr.....Address.

G. A. B. Co.

ARSENO-MER-SODIDE

A product that is giving real results in Syphilis
Composed of Arsenic, Mercury and Iodine. Non-Toxic.
Ready for instantaneous use—No preparation necessary

Sold in Boxes of 20 c. c. [am-] poules

Price per box $9.00

George A. Breon & Co.
KANSAS CITY CHICAGO ATLANTA DENVER
Purveyors to the Physician Exclusively

The Best, Quickest, and Safest Treatment of SYPHILIS

SUPSALVS

STABLE SUPPOSITORIES containing "606" (arsphenamine). (Also made with 0-03 gram. for children.)

SIMPLE IN USE—RAPID AND EFFECTIVE ABSORPTION. PRODUCES NO UNDESIRABLE EFFECTS

The clinical experiences of Ehrlich, Levaditi, Sabouraud, and Bargrov have conclusively proved that the activity of "606" is greatly increased after it has been taken up and activated by the liver, and they recommend its administration per rectum.

For Mercurial Inunction in Connection with SUPSALVS Treatment.

MERSALV

A non-greasy preparation containing 10% of METALLIC MERCURY in the highest form of subdivision, and unlike most mercurial ointments MERSALV contains no organic fats or oils. It is of a white creamy consistency, pleasant odour and cleanly in use. (In Special Glass Stoppered Bottles for Hot Climates.)

THE ANGLO-FRENCH DRUG CO., Limited
WILSON BLDG., 1270 BROADWAY Phone Madison Square 6683 NEW YORK CITY

1860-1920

With the coming of 1920, the house of Reed & Carnrick will round out

SIXTY YEARS OF FAITHFUL SERVICE
TO THE MEDICAL PROFESSION.

From the inception of our business we have ever sought the friendship and confidence of physicians, and whatever results we may have obtained, we do not hesitate to attribute largely to the splendid co-operation that has been given us by the medical profession.

Therefore, in calling attention to this—our Sixtieth Anniversary—we wish to thank our many medical friends not only for their unfailing interest and good will, but also to assure them that, as in the past, we shall continue to regard their confidence as "our greatest asset".

REED & CARNRICK
JERSEY CITY, N.J.

A Real "First Aid" to Busy Doctors

THE MODERN
ANTIPHLOGISTIC
AND
LOCAL ANODYNE

CAN be used as an inunction as well as antiphlogistic dressing. Indicated in Threatened Pneumonia, Bronchial and Pleutritic affections, Croup, Lumbago, Rheumatism, Sprains, Aching Muscles, Joint Injuries, etc. A prominent Georgia physician says:

"I was accidently struck by an automobide, knocking me down and severely spraining my ankle. I applied Diaplasma, and in 24 hours was completely relieved Ono application also sured an inflamed abrasion on my granddaughter's neck. It works like magic."

DIAPLASMA

Penetrating-Effective-Convenient

In Three Handy Sizes:

Smoll size (¾-oz. *tubes*) $2.40 *per dozen*

Medium size (1¾-oz. *tubes*) $4.80 *per dozen*

Large size (22-oz. *jars*) $3.80 *each*

Write for Literature and Sample

THE WM S. MERRELL COMPANY
CINCINNATI, U. S. A.

The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

Vol. 27, No. 1 January, 1920

A Happy New Year

WE have said it often in the past, in good years and in—we almost said, bad years. Yet, are there any really *bad* years? There are periods of time bringing experiences that we do not like, that cause distress and even deprivation. There are times like those just past, when everything, the whole world, seems to be in a turmoil. Still, after all, is it not true that we are, individually and collectively, largely responsible for that which comes to us? We make our lives, not, perhaps, deliberately as we wish to have them, but, nevertheless, they are influenced profoundly by our past actions. So, if we wish you and ourselves a happy new year, we wish that we, all of us, may in the year just started fashion our fortunes, accomplish our duties and do our work in such a manner that we may feel confident of having done the best that is in us and then to let the results take care of themselves.

One year ago, our colleague Dr. George F. Butler sent us a Happy New Year wish that is so entirely different from the hackneyed everyday forms of New Year's greetings that we preserved it carefully. With Doctor Butler's permission, we are passing on his wish as being extended by himself and by us to the entire CLINIC family. So, here it is.

HAPPY NEW YEAR

How easily this legend, "Happy New Year," drops from our lips, and yet what unconscious charm and mystery are wrapped up in the three short words, especially in the short middle word. "New!" It contains the physical and moral interests which always cluster about beginnings. "New Year, new life." So runs the cheering Spanish proverb appealing to what is manliest in human nature, as well as deepest in spiritual life.

The new year does not, as people say, "come round again." It has never been here before. 1920 looks down upon us from the calendar on the wall for the first time in our lives. "Good Morning, Mysterious Stranger! What hast thou for us? Is it a chance, an opportunity, friends,

fortune, something beyond our fondest dreams?" The oracular newcomer is silent. It cannot answer our ardent query. The solution is a secret. The mystery is hidden. Only as we tear off the leaves of the calendar, one by one, can we solve the riddle. And it is better so. We are not prepared for the announcement of life's joy or pain until the days fit us for the revelation.

We do not "turn over a new leaf" on New Year's Day. We can do that at any time. At New Year, it is turned over for us. We are inevitably transferred to a new era. The diary on our desk has its new fresh pages open. What shall the record be? How we should like to know, but we cannot put it down. Only the slow process of days will allow us.

The sense of a new beginning on New Year's Day for all humanity is a great leveler. The most beautiful old-world custom on New Year was, for master and servants to exchange places. The servants sat down at the table while the master served. The New Year is the non-ecclesiastic, the most non-sectional and non-sectarian festival in the calendar. It puts our humanity upon its most universal and most cordial basis.

We will not league ourselves with any fate which tries to close the path to opportunity, to new ideas, to full realization of all that the future offers. It will never do to despair. Above the chagrin and perplexity of mortal existence, the littleness of mind that chills, the selfishness of aim that too often mars our enjoyment of social relations, the everlasting truths of righteousness and good-will abide and reassert themselves. The past is no more; the future is immortal and full of promise, and wise and happy is he who, even from the ashes of regret or failure, unwearied by defeat, can still rebuild the broken temple of his hope, and feel within his heart the courage to move on and upward toward the goal of his most noble ambition.

Like milestones by the wayside, come to us these New Year seasons, bright with an unconscious, yet pervading, trust that all is well, however inscrutable be the grim lessons of experience. So we stand our ground firmly, a moral leverage is given us in the days that are gone forever, and for saint and sinner, rich and poor, honored and unknown, there is inspiration in the thought crystallized in the fine Castillian adage, "New Year, new life."

In this spirit I wish you and all of my friends a Happy New Year, and the best that the mysterious stranger, 1920, has in store.

A mind, firm and enlightened, is without inquietude.—Cicero.

"The Management of Influenza and Pneumonia"

The author of this interesting article, appearing in CLINICAL MEDICINE for December last, Dr. Bernard S. Maloy, was made to appear as residing in LaGrange, Illinois. This is an error. Doctor Maloy's address is 3454 W. North Ave., Chicago, Illinois, and we take pleasure in recording the correction.

OUR FRIENDS, THE ECLECTICS

"There are no lines of doctrinal division in pharmacy. It acknowledges an equal duty to all branches of medical practice. It recognizes an obligation to produce with equal impartiality and equal fidelity the synthetics, biologics and energetic mineral remedies favored by the elder branch of medicine, the liquid and solid educts and products of plant drugs that have been developed and employed with such distinguished success by the Eclectics, and the high attenuations and triturations characteristic of Homeopathic practice."

These remarks were made by Prof. J. H. Beal, director of pharmaceutical research at the University of Illinois, in an address delivered before the forty-ninth annual session of the National Eclectic Medical Association, held at Chicago, in June, 1919. In the course of this address, Professor Beal reviewed, in an exceedingly interesting manner, the history of therapeutics in our country from the beginning and paid deserved tribute to those men who rebelled against the prevailing medical practice of the early period, sought for happier things and established a system of treatment, the sane and successful principles of which forced themselves upon the dominant school and of necessity were accepted virtually, although the debt to Eclecticism never has been formally acknowledged.

At the period when the American states, newly emancipated from European control,

still were under the dominance of medievalism in medicine, the prevailing medical practice was a system of bigoted adherence to ancient theory, of blindness to manifest facts, and of cruelty to suffering humanity such as at present can scarcely be imagined. In spite of frightful mortality, patients were blistered, bled, and drugged with mercury and antimony, to an extent that would seem incredible were not the recorded facts beyond spite.

Although, even in those early days, certain thinking men objected to the evils of existing practice, those enjoying the prestige of established authority were in full control and resented all attempts at innovation. Its practitioners adopted the dignified title of *rational* to designate their own methods and procedures, while the innovators and dissenters were denominated *empirics* and their practice as empiricism.

With fine irony, Professor Beal adds that, if interpreted according to medical history, rational therapeutics, if it means anything, means the application of remedial measures in accordance with the prevailing theories of therapeutics and practice; in other words, therapeutics according to theory. Consequently, what is rational to one generation is quite likely to be irrational to the next. And he adds that, written out in full, the story of rationalism in medicine is the story of dogmatism in medicine It has always appealed to that quality of the human mind which prompts it to prefer a dogmatic explanation of a mystery to a mystery unexplained, and to accept as explanation whatever is delivered in the name of authority and frequently repeated.

If by empiricism is meant the use of remedies without the exercise of reason or judgment, the term is justly one of reproach; but, if it means the defiance of artificial standards and preconceived theories of therapeutics, and the selection of remedies solely upon the grounds of their merit as proved by experience, the title should be regarded as one of honorable distinction.

Measured by practical results, has not so-called empiricism vastly more to its credit than what commonly passes for rationalism? Has not the one given us virtually every valuable agent in our materia medica and almost every valuable method known to modern therapeutics; and has not the other given us almost nothing but a series of hideous errors?

The earlier stages of the reform movement against established methods consisted mainly of a general and unorganized protest against dogmatic medicine. As the movement gained in volume, the individuals began to segregate into special groups around the more aggressive leaders. These groups had little in common among themselves except their opposition to the drastic and dangerous system of medication which they aimed to replace, and their general employment of botanic drugs of American origin.

Very soon, certain leaders arose among the dissenters, physicians thoroughly trained in the sciences and doctrines of the old school, men of unusual capacity and learning but of sufficient independence of thought and judgment to reject the dogmas of authority when these were contradicted by facts. Gradually, under this more intelligent leadership, there was a drawing together of the separate groups of reformers, a gradual elimination of extravagant and fanciful doctrines; and, early in the beginning of the last century, the reform began to assume definite shape and character.

Needless to say, this reform movement was received fiercely by the school in authority which even resorted to appeal to the legislatures in which they succeeded in causing the new practice to be made illegal in a number of states. The resentment of innovation and improvement was so unreasoning and blind that, as late as 1845, one of the chosen spokesmen of the old practice publicly declared that "medical science does not need, nor is it susceptible of, further improvement or reform."

Under such difficulties, to put it mildly, the school of American Eclecticism was founded, the leaders of which are known to all reading and thinking physicians both of the last and of the present generation.

The name "Eclectic," as signifying the selection of the best from every source, might be claimed with propriety by a member of any school, since the conscientious physician always will select the remedies and measures that seem best to him for the treatment of his patients. The special significance of the term as the designation of a system or practice is, in the methods of selection employed and in the criteria by which the quality of the selected agencies

are determined. It is in these methods and criteria that modern Eclecticism finds its distinguishing characteristics. Among the results of eclectic influences upon medical practice may be enumerated briefly the following.

Antagonism to blood letting. This was directed against the unreasoned and brutal custom to "bleed the patient until he is white" which was believed in and followed zealously even in the first half of the last century. The absurdity of the extremes to which even leading physicians went will readily be seen when we consider that patients were bled for everything alike, for yellow fever, pregnancy, for consumption, and even for broken bones and Asiatic cholera. Professor Beal declares pointedly and justly that, if a physician of the present day should practice such depletion upon a patient as was inflicted upon George Washington in his last illness, and which, with the accompanying treatment, undoubtedly hastened the death of that illustrious American, he would almost certainly be convicted of manslaughter by a jury of his peers, if, indeed, the indignation of the community did not inflict more summary justice.

Objections to the excessive use of mercurials, which formerly were administered as a part of routine treatment and often pushed to the point where they produced truly baleful results. Professor Beal is under the impression that it was one of the fathers of Eclecticism who was among the first to advocate the use of calomel in 1-10-grain doses, repeated half hourly, as the means of obtaining the full results of that agent without its attendant dangers.

Opposition to Opiates. In view of the indiscriminate blistering and bleeding and drastic purging of the early days, it is easy to understand why the anodyne effects of opium were so highly prized. It was the Eclectics who, years before the federal antinarcotic legislation, objected to the use of opium except under extraordinary conditions and with extraordinary precautions against habit formation and they properly included cocaine and similar products among the remedies to be employed only exceptionally.

Eclectic predilection for "kindly" medication was directed against cantharidal and tartar-emetic blistering, often to the extent of suppuration, and to drastic purgation to the limit. Instead of the exploded idea of expelling disease by violent measures, the natural curative processes of the organism should be invoked and supplemented or directed into normal channels by noninjurious medication.

Other attainments of the Eclectic school, for which it deserves the thanks of the medical profession at large and even more of the patients, are, the development of an American material medica through which the beneficial properties of American drug plants were developed and made accessible; simplicity in prescribing and socalled specific medication through which a sensible and reasonable method of administering drugs in accordance with clearly defined indications was established. It was the Eclectics who insisted early that not a disease or disease-name should be treated by any method whatever but that the *patient* required the physician's assistance and that the symptoms presenting themselves to his discerning eye called clearly for alleviation and removal through which, in time, the pathological conditions might be restored to normal. Together with the last two factors mentioned, the Eclectic school has to its credit many contributions to materia medica and to pharmacy and, at the same time, it was a potent force in opposition to the tendency toward therapeutic nihilism which was vaunted so aggressively by certain "leaders" of medicine who objected to anything that could not be demonstrated in the laboratory.

There is much more of interest in the remarks made by Professor Beal in his memorable address which is the more to be appreciated as it was delivered by a prominent leader in his particular work and by an authority of renown.

We have always had a feeling of close association with our friends and colleagues of the Eclectic school, most of whom, indeed, utilize "definite" remedies in definite dosage and according a clearly defined indication, just as we have always insisted upon it as necessary in the use of positive remedies, more particularly active principles. We ourselves owe much to socalled Eclectic remedies which we use freely, and we have believed it proper to call attention to the debt that we owe to Eclecticism. It is to be hoped that school distinctions may be obliterated in the course of time and that, ultimately, all physicians will be "ec-

lectics" in the sense that they select the best remedies and means of treatment for the conditions confronting them at a given time without reference as to whether these remedies and procedures have been "proved" in the laboratory or whether they carry the o. k. of "rational" therapeutics and of authorities in medicine.

Remember, on every occasion which leads thee to vexation, to apply this principle: That, though this be a misfortune, to bear it nobly is good fortune.—Marcus Aurelius.

"SENTIMENTAL JOURNEYS"

Our friend Dr. George F. Butler desires us to say that physicians who wish to have reprints of his "Sentimental Journeys of a Sentimental Doctor" will receive them on request.

The pamphlet contains an account of the automobile trip as it was published in CLINICAL MEDICINE for June and July, 1919, and also that of a trip taken by Doctor Butler, some years ago, together with Doctor Hazeltine, and reported in CLINICAL MEDICINE for September, 1915.

ACTIVE-PRINCIPLE THERAPEUTICS

THE AMERICAN JOURNAL OF CLINICAL MEDICINE always has stood for definite and well-considered treatment, as it is called for and indicated by the clinical conditions present in the patients who consult the physician. The tendency to "let nature take its course" unaided, uncontrolled, that prevails in many places, and the opinion, frequently expressed, that drugs are not capable of modifying the course of such diseases as those of bacterial origin, while their curative action in other maladies is doubted likewise, always has been abhorrent to us. We are convinced that proper drug treatment is not only useful but is urgently demanded. We are quite certain, to paraphrase an expression of Dr. Solomon Solis Cohen, that the right remedy given in the right dose at the right time will accomplish what it is designed to do.

While we do not, by any means, deny the great value of biologic methods of treatment, especially the employment of vaccines, or bacterins, serums, organotherapeutic products, and similar remedies, and while we likewise agree freely that the so-called mechanotherapeutic or physiotherapeutic methods of treatment, particularly hydrotherapy, electrotherapy, and so forth, are capable of doing immense good in indicated conditions, we can not close our eyes to the fact that the old-fashioned remedial agents have been unduly neglected. We refer especially to those drugs of vegetable and mineral origin that for many years formed the standby among the remedies of most physicians and the action of which upon the animal and human organism has been studied with great care, more particularly in the last ten and twenty years.

In the case of the drugs of vegetable origin, the last twenty years have witnessed an irresistible revival in their popularity which was in direct opposition to the therapeutic nihilism that became very insistent at about that time. The demand for greater exactness in studying the actions and effects of remedial agents was met in many cases by the preparation, from vegetable remedies, of definite chemical substances in the form of alkaloids, glukosides and so forth. On the other hand, the mineral drugs were studied more also, and those derived from metals were prepared in such forms as to become of greater use. We refer, for instance, to the colloidal preparations of minerals.

All this is very encouraging and it proves the good sense of the medical practitioners at large that they have not permitted themselves to yield to the insinuations of therapeutic nihilism but that they have kept on sawing wood, studying their remedies and employing them where they were indicated.

Nevertheless, we believe it well that more should be published in regard to definite drug treatment, and we are convinced that much of general value and information could be printed on these subjects. This, of course, places the matter squarely up to the practitioners. It is for you on the firing line, in the field, in active practice, to communicate the results of your observations and experiences for the greater good of the profession, and it is for this reason that, once more, we send out a call for letters, articles, and communications in general on the subject of the drug treatment of disease. The more closely you observe, the better you will be able to record your results. The more you write and oblige yourself to formulate your views clearly and lucidly, the more clearly you

will be able to make up your minds. Besides, by doing so you will help all of us and, thereby, also live up to the oath that you have sworn on entering the profession of medicine.

A PERIOD OF GRACE

In view of the fact that the world was supposed to have ended on December 17, the editor of a certain Wyoming paper editorially requested that all delinquent subscribers pay up before that time, as he did not relish the idea of chasing all over h--l to collect two dollars a piece from them.

Now, that the world seems to be following its usual course through the universe, undisturbed, except by frequent eruptions from Congress and Labor, it is well to remind our readers again, that the subscription price of CLINICAL MEDICINE has been advanced from two dollars to three dollars a year.

Due and timely notice of this advance, as well as good and sufficient reasons therefore, were presented some months ago through our editorial columns. Subscribers were urged to renew their subscriptions at the old price. Many did—some did not.

We appreciate the fact that CLINICAL MEDICINE subscribers are progressive, they are kept busy, in fact, to such an extent that matters of this kind sometimes escape their attention. For this reason, we are extending the period of grace in which our present subscribers may renew their subscriptions at the old price of two dollars a year.

We have always tried to give our readers more than their moneys worth. Judging from the multitude of letters that we are constantly receiving from the field, we are succeeding in getting out a medical journal which is not only scientific and progressive but at the same time interesting and practical. This combination, you will have observed, is somewhat rare in the medical-journal field. Our program for 1920 will be found wonderfully helpful.

We urge that every reader of this editorial will take advantage at once, if he has not already done so, of this special offer to get in under the wire at the old rate of two dollars a year, for one, two or three years.

Let's do this now. Turn to advertising page 14 and fill out the subscription blank found there.

Before you exist for others, it behooves you to exist for yourself; before giving, you must first acquire.—Maeterlinck.

A NEW IDEA IN SANATORIUM OPERATION

In the worldwide warfare against tuberculosis, the question has repeatedly arisen as to whether sanatoria should be maintained chiefly for incipient and curable cases or principally for the isolation of advanced and open cases. While opinion has changed from time to time, the present feeling is, that each general community should have institutional facilities for both early and advanced cases.

Ten years ago, virtually all of the sanatoria were designed for incipient, or early patients. The few institutions for advanced patients, then existing, being founded primarily for the purpose of housing and isolating patients in order to prevent the spread of the disease, such sanatoria, or hospitals, for the most part had the hopeless atmosphere of the asylum for the incurables.

During the past few years, less stress has been placed upon the contagiousness of tuberculosis and, in consequence, hospitals for advanced consumptives have assumed a much more humane and cheerful aspect.

The chief objection to institutions designed to house both, early and advanced patients, particularly if these institutions are small enough to be satisfactorily conducted is, that the intermingling of the two classes is more or less depressing and undesirable.

Dr. George Thomas Palmer who has served for many years as President of the Illinois Tuberculosis Association and who, for a number of years past, has operated a private sanatorium, The Springfield Open Air Colony at Springfield, Illinois, has frequently stated in his public utterances and writings that the combined institution for early and advanced patients is justifiable only on account of economy and overhead expense. In developing his Institution, Doctor Palmer has followed rather the unique plan of maintaining a hospital for active cases and a sanatorium for early cases, both institutions being under the same management and medical and nursing super-

vision, although located on entirely different grounds. In the development of this plan, Doctor Palmer has recently opened a modern tuberculosis hospital of thirty-three beds, located within ten blocks of the State Capitol in the heart of the city of Springfield. The Open-Air Colony for earlier cases is charmingly situated in the outskirts of Springfield, in the Washington Park District.

The new hospital, which is known as the Homestead and which prides itself upon the fact that its atmosphere and furnishings bear little resemblance to those ordinarily found in medical institutions, is used as a receiving place for all patients who are retained in the hospital for thorough examination and observation and until the subsidence of active evidences of disease. On nearing convalescence, the patients are removed from the Homestead to enjoy the country life at the Open-Air Colony.

The Homestead has been in operation only a few months, but, the plan has proven so satisfactory that it is winning the commendation and approval of the most experienced sanatorium managers and it is not unlikely that the idea will be adopted in the future in those institutions where efficiency of operation is placed above the question of overhead cost. Even on this point, Doctor Palmer declares that careful management may eliminate the factor of high expense, since he has found it possible to operate the twin institutions with the maximum of service at rates lower than are offered by most of the midwestern institutions of the old dual type.

As another innovation in institutional management, Doctor Palmer is voluntarily imposing upon his own institution the standards of sanatorium operation recently adopted by the National Sanatorium Association. These standards bring out strikingly the importance of tuberculosis as a medical specialty, of a hundred points, on which sanatoria are graded. Location and site are accorded three points, plant and equipment five points, administration eighteen points and medical and nursing service seventy-four points. In the application of these standards, the Illinois Tuberculosis Association is urging that tuberculosis medical work must be regarded as a medical specialty as definite and distinct from general practice as operative surgery and, consequently, almost seventy-five per-cent of the credits for institutional management are based on the specialized character of the medical and nursing work.

The first and last and closest question is: What do you like? Tell me what you like and I will tell you what you are.—John Ruskin.

"CLINICAL MEDICINE" FOR YOUR FRIENDS

A wonderfully fine trait found in most people and, particularly, in the medical profession, is the desire to pass on a new idea, a helpful suggestion, or a good thing of any kind. Our capacity to absorb and grow, ourselves, often is measured by our willingness to cooperate with and help others.

Every doctor who has been reading CLINICAL MEDICINE for any length of time, knows that it is a good thing. Without a doubt, he has doctor friends whom he would like to have receive a copy of this January issue.

Now, here is the plan. Won't you sit down and send us the names of two, three, five or more doctor friends to whom we can send complimentary copies of this issue of CLINICAL MEDICINE. There is no expense involved either to you or your doctor friends.

To every one of our readers who sends us such a list, we will reciprocate by sending a fine photogravure of General Pershing, ready for framing. This is the latest official picture of the General and one which will please you.

We want these names just as soon as possible and before our supply of January copies is exhausted. Send just as many names as you wish, Doctor; that is, of physicians you know. We will check the lists here to see if there are any who are already receiving CLINICAL MEDICINE. If not, we will send one specimen copy and state in our letter that the journal is being sent on your suggestion.

We hope, and believe, that there will be a general acceptance of this plan to pass on a good thing and thus to grow ourselves.

CARELESSNESS THE GREAT AMERICAN SIN

Statistics just published show that, in the 19 months during which the United States was at war with Germany, 50,150 American soldiers were killed in battle or died

from wounds; while, during the same period, 126,654 people were killed in the United States, by accidents.

What a text for a sermon! What a commentary on the great American fault of carelessness! When we add to these figures the tremendous destruction of property by fire and other accidents, the appalling total ought to make us ask ourselves in all seriousness whether there is any lesson so much needed by the rising generation as that of carefulness—in other words, efficiency.

Some writer has defined a crank as a person who sees some one truth so vividly that he is blinded to all other truths equally important. Perhaps there are other evils as great as this one of carelessness, but, it would be a fortunate thing for us all if there were more parents and more employers willing to be classed as cranks on the subject of carefulness. Education of the masses by continual agitation of the subject is the great need of the time. Parents should be brought to see that a child with the habit of heedlessness will, if not checked, grow up to be a menace to his fellows.

The characteristic American trait of taking chances, in other words, gambling on luck, really is a form of carelessness and a very dangerous one, as is manifested by the great frequency of automobile accidents. The speed maniac gambles on the chance of getting through without hitting anything. The foot passenger takes the chance of crossing the street without first looking both ways; and, between the two, the deathrate climbs.

Again and again, we read in the newspapers a report of somebody being struck by an automobile, the story ending with the words: "The driver of the car was released as the accident was unavoidable". That sentence contains the gist of the whole matter; yet, it is a misstatement of fact. To make it true, we would have to add the phrase: " . . . at the rate of speed at which the car was moving." It should be required of every driver of a car moving along city streets that he keep his car under such control that he *can* avoid running people down. If that means driving slowly, then let it be slowly. Better that than killing people.

There are but two remedies: educate and punish. Educate the public and particularly the children; and punish the man who is careless—not lightly, but, severely. Hold him responsible for the harm he does.

From January first, 1919, to the middle of November, 366 people were killed by automobiles on the streets of Chicago. Think of it!

The secret of happiness is to moderate our desires. To enjoy the pleasures, we must know how to leave them. Prosperity, adversity, these are but names: our happiness is in ourselves alone.—Voltaire.

RED CROSS STAMPS

When this issue of CLINICAL MEDICINE reaches you, the Red Cross Stamp Drive will be a part of history. It is useless, therefore, to urge physicians to lend their full and cordial support to this annually recurring method of securing funds for the further conduct of the Antituberculosis Campaign.

If, nevertheless, we refer to the Red Cross Stamp Drive, we do so deliberately, with the purpose of calling attention to the unchanging importance of this movement. The proceeds from the sale of Red Cross Stamps remain in the individual states and are expended in greater part in behalf of the tuberculosis campaign there. Whatever is collected in a certain state is spent for the benefit of its own tuberculous patients. The principle dictating the sale of Christmas Stamps is not limited as to time. It merits our constant enthusiastic and wholehearted support throughout the whole year.

PHYSICIANS' FINANCES

At this time, one year after the signing of the armistice and the cessation of hostilities on the western front, the economic consequences of the war appear to be even more seriously manifest than they were one year ago. Instead of lower prices for the necessities of life, principally, for food, clothing, and shelter, the cost of these items has risen so materially that everywhere there prevails anxiety and foreboding of yet worse things to come.

Nor are the social conditions more encouraging. Indeed, there is manifest a deep-seated unrest and dissatisfaction, expressed most emphatically by those radicals, inhabitants of our country but rarely citizens of it, who, having little to lose and

being opposed constitutionally to the existing order of things, are not afraid to stir up strife and malcontent, so that the conservative and settled members of the population can not but view conditions with great anxiety.

In all walks of life, in all kinds of work and of production, there is a constant demand for greater returns for value given. The much higher prices of the necessities of life naturally can not be paid by most people unless they enjoy an income proportionally greater than it was in normal times; while those controlling the production and distribution of these necessities seize the occasion to make a killing and to amass the fortunes so eagerly desired by the successful profiteers. Among the profiteers who have become opportunists and who are making use of the tendency of the times, are especially many members of organized labor, who even have lost respect for the sanctity of their given word and do not hesitate to break contracts with their employers into which they had entered solemnly. However, in almost all directions there is a tendency to raise prices and wages.

It is mainly the members of the socalled middle class, the salaried employes, the clerks, salesmen, tradesmen, and, also, the professional men and women, that suffer, almost without redress, from the inflation of values. It is they, the backbone and mainstay of the population, that are obliged to bear the burden of the load, having to pay not only the increased prices for necessities, but being burdened in addition with the necessity of paying taxes far in excess of those prevailing in normal times; and, all this, without the compensatory advantage of increased incomes. Indeed, the "salaries" of the majority of these unfortunates have experienced so slight increases, if any at all, in the last five, and ten years as to place it quite beyond their ability to meet the increased expenses of ordinary decent living.

Newspapers and magazines often contain suggestions for the mending of these intolerable conditions. Some good counselors blithely advocate the "organizing" of the middle classes, of the salaried clerks, salesmen, tradespeople and so on; all those who do not, and can not, belong to the unions, whereby they might appoint representatives to raise the voice of protest in their behalf. Unfortunately, the question as to how this organizing is to be accomplished is left as beautifully obscure and unsettled as it ever was. At the present, we can but hope that the socalled middle classes will yet find a way to make themselves heard and to register their emphatic protest against the attempts that have been made for years and, often, quite successfully, to grind them between the millstones of capital and labor.

There is one class of professional men that, while organized, in a way, yet are without any cohesion and consciousness whatever of "belonging"; of whom the separate individuals go their several ways independently and personally, without any wellmarked class consciousness and without knowing how to bring about a better sticking together, even for personal and collective material advantage. We refer, of course, to the medical profession, more correctly, to the physicians of the country, since there does not exist, as already said, a united medical profession.

The position of the physician, in the socioeconomic life of the community always has been somewhat of an anomaly. In the olden days, when the healing art was practiced by the priests, no fear of deprivation of material comforts needed to be entertained, since the patients always came to them fully supplied with votive offerings and sacrifices. Later, especially in the days of the Roman empire, the duties of physicians were attended to mainly by slaves who, naturally, were not entitled to commensurate compensation for their services, even though they were chastized and punished severely enough if the outcome of their treatment did not coincide with what their masters considered as proper.

During the middle ages, physicians had, in a way, returned to the methods of the priest-physicians of old, in so far as they refrained from set and stipulated charges of remuneration, while accepting this by way of a "honorarium" when it was offered; much as a sacrifice or votive offering was accepted by the priest. It was, then, only the quacks, the irregular practitioners who imposed upon the credulity of the ignorant and reaped a rich harvest. The respectable physicians went their studious ways, groping many times blindly in their search for light, especially during that period when it was considered sufficient to

study and adhere to the writings of Hippocrates and of Galen, as they were explained dogmatically by the professors.

The custom of receiving merely a "honorarium" for his services has thrown its shadow over the business side of the physician's activities down to our times. Many physicians still believe it derogatory to the dignity of their calling to make suitable charges for their services and they make out bills under protest. Many, to be sure, err as greatly in the other direction and are frankly in the "business" of medicine and surgery, particularly surgery, for all there is in it.

It is the former, those physicians who are keenly conscious of the sanctity and the altruistic, elevated character of their calling that need to be reminded of the inexorable change of times and custom. While we can well understand and sympathize with the attitude of the physician who intensely dislikes to make out bills, and who can not bring himself to charge adequately for his services, especially in the case of poor people or people in moderate circumstances, we feel that it is necessary to remind him that services given cheaply are held cheaply and are but rarely appreciated or valued. Further, it needs to be pointed out not only that the laborer is worthy of his hire but also that the physician who refuses pay for his services or who accepts small pay, at least where his clients are able to meet a suitable bill, cheapens the calling that he honors so highly and drags it down in the estimation of the people. Without a doubt, the laity, at least in part, consider the merits and the abilities of medical men in accordance with the display that they make as to personal appearance, office equipment, automobiles, and so forth. The physician who looks shabby, who receives and treats his patients in an untidy, dusty, poorly equipped office, who drives a dilapidated car of ancient make, will necessarily be compared to his own disadvantage with his colleague who is well tailored and well groomed, whose office is beautifully furnished and fully equipped and whose car is in accordance with the dignity of his "business."

We realize that, many times, the physician not only must live among poor people but, in the nature of things, be one of them. Still, the old-time attitude of the people is, to look up to the physician who should decidedly be above his clientele, not only intellectually but economically and socially as well. It is, therefore, the physician's duty to put himself into a position in which he will receive adequate and commensurate return for his services; this, for the sake of maintaining the dignity of his profession, but, also because he owes the solemn duty to his family, his wife and children, to do as well for them as he can honestly.

There is no doubt but that, at the present day, physicians are entitled to greater returns in view of the fact that the diagnostic and therapeutic procedures require so much more knowledge, time, effort and study than they did formerly. Without entering into the details of fees for services rendered and for clinical investigations, we maintain that a physician's income should be that of a well-to-do citizen.

How to bring about the change leading to this improvement in the physician's circumstances, is a question that has occupied economists in the medical profession for years. To us, the matter seems apparently simple if certain conditions could be complied with which are, mainly, to create a willingness and determination among physicians to stand together as a class and to insist upon proper returns for their efforts and labors; then, fair dealing amongst each other, giving up all unfair, invidious and back-biting competition, while putting in its place a sturdy and loyal business-like method of competing one with the other. Also, there is required the development of a true *esprit de corps* in the individual physicians which is not to be an academical or theoretical love of one's profession, in the abstract, but the consciousness of each physician that he is a close colleague and fraternal associate to every other medical man. Finally, the medical societies that are in existence now could and should take up the matter to attempt to include in their membership all honorable physicians; they should try to bring it about that their society-activities are carried out without politics and personal self-seekings but that they are undertaken for the good of each member of these societies as well as for the collective advantage of the profession.

In this manner, steps could be taken by which the economic circumstances of the individual physicians could be improved and raised to the status that it should occupy. What do you say?

Leading Articles

French Influence Upon Pharmacology and Toxicology*

By DR. A. GABRIEL POUCHET, Paris, France

Professor to the Medical Faculty of the University of Paris. Member of the Academy of Medicine. Vice-President of the Superior Council of Public Hygiene in France.

I PURPOSE to review, in this conference, the part taken by French science in the discoveries that have been effected in the domain of pharmacology and toxicology, and, also, the influence that French science has exerted upon existing views. Necessarily, only a very superficial review is possible. Many of the questions which I shall treat summarily might be developed interestingly, but, the limited time permits me to indicate only the outlines of the vast program.

Professor A. Gabriel Pouchet

In order to avoid repetition and confusion, I shall follow in this review the arrangement employed in my course in the Paris medical school and which is based upon a study of pharmacodynamics; † adding a chapter devoted more particularly to toxicology.

Hypno-Anesthetics

In 1831, Soubeiran, one of my predecessors in the chair that I have the great honor to occupy at the present time, discovered chloroform, obtained almost at the same time, though by different methods, by Samuel Guthrie, in America, and by Liebig, in Germany. Its chemical composition was established by Dumas, in 1835. In 1847, Flourens undertook its pharmacodynamic study, soon afterward carried on by Simpson, of Edinburgh, to whom we owe its first practical application.

Already at this time, French physicians and physiologists had revealed numerous analogies existing between the physical qualities of the ethers and their chemical constitution, investigating whether their physiologic actions could be compared as well. The results that were secured were summarized in the doctor-dissertation of Chambert, submitted in 1847, and in which he insists upon the fact that certain compound ethers may be utilized for anesthesia; but, he observed that acetic ether was an energetically inebriant agent, while its anesthetic action is only temporary. In this respect, Chambert compares formic ether with acetic ether and shows that the former is more energetic. The researches of Paul Bert have given us, since them, the reasons for this difference of action. It is

*Translated from the French manuscript.

†Report of a lecture delivered at a conference of American Students, on May 16, 1919.

in consequences of those researches of Flourens that Sédillot used chloroform for the production of general anesthesia.

Much later, Regnault, my immediate predecessor in this chair, partly alone and partly in collaboration with Villejean carried on his remarkable studies upon methane and its chlorine derivatives. He detailed the conditions in which one could secure and preserve rigorously pure chloroform for anesthetic purpose and completed the pharmacodynamic study of the chlorine derivatives of the hydrocarbons, in regard to which I have established the important role of the symmetry or asymmetry in the substitution of the chlorine with reference to the anesthetizing or toxic action.[1]

Analgesics

In this group of remedial agents, the discovery of stovaine is the most important one. Its preparation is recent and is due to Fourneau. It originated in the study of tropacocaine and of the chemical constitution of cocaine as well as of the compounds that were tried as substitutes for the latter. The pharmacodynamic experiments had shown that the essential factor of the anesthetizing action resides in the benzoic-ether radicle and that, on the other hand, the amino radicle is necessary in order to permit the solubilization of the molecule in the state of a salt. Fourneau assumed that, if one reduced tropacocaine to its two essential radicles, by suppressing more especially its double nucleus (piperidine-pyrrolidine), one would arrive at the construction of a simple molecule which was at the same time anesthetizing and slightly toxic. This was the origin of stovaine which has not yet been replaced incontestably and advantageously in spite of the attempt to prepare substitutes that were more serviceable and less toxic such as alypine and novocaine.

Modifiers of Intellectual Power

In the group of the modifiers of intellectual power, the different alcohols have been subjected to careful investigation by Charles Richet, whose conclusions were published, in 1893, in the form of law, recalling closely the two laws of Rabuteau; namely, the atomic or thermic law and the law of electivity, which we shall refer to again later on when discussing the metals. Richet insists upon the fact that the toxic properties of these substances stand in close relation to their solubility. Comparing the substances endowed with approximate chemical properties and with analogous molecular constitution, he proposed a preliminary classification; mineral salts, alkaloids, alcohols and alcohol derivatives. Concerning the alcohols, the study of their pharmacodynamic action makes it possible to establish the parallel between solubility and toxicity. The more soluble they are, the less toxic.

At about the same period, Charles Richet and Henriot obtained chloralose, that peculiar combination of chloral with glucose, constituting a poison that is especially psychic and limiting its action to the cortical zone of the brain. Under its influence, the brain becomes torpid, while the medulla still is active and even over-excited, and one observes an interesting dissociation in the functions of sensibility; the sensibility to pain is completely abolished, while the sensibility to mechanical stimuli is excessively increased. The respiration, the heart, the circulation, are not injured by feeble doses. This chloralose has proved to be a remarkable indicator of latent neuropathies and it is moreover one of the rare remedial agents that have made possible the study and differentiation of certain cerebral functions, especially psychic blindness.

I utilize this opportunity to direct attention to the extremely important, though generally misinterpreted, role played by French scholars in the discovery of the alkaloids in general and more especially of morphine. It was Derosne who was the first to prepare, in 1803, a crystallizable product known under the name of "Derosne's salt" and consisting mainly of narcotine. He obtained it by simple dilution of a syrupy solution of opium extract that had been left undisturbed for a long time. Precipitating it by means of alkalies, this same watery solution of opium extract yielded a mixture of morphine and narcotine which, undoubtedly, did not attract his attention because of its amorphous appearance.

The following year, in 1804, Séguin took up the investigations of Derosne and was the first to speak of an alkaline substance capable of causing the syrup of violets to

[1] Conf. G. Pouchet.—Leçons de pharmacodynamie et de matière médicale, lre série, p. 288, Paris. O. Doin, 1900.

become green, which would separate upon the addition of alkalies to the aqueous solution of opium and form salts by combining with acids. But, misled by the preconceived ideas dominant at that period concerning the nature of alkalies and the principles existing in vegetables, he did not persist in his first researches and, especially, did not have the courage to give to the product that he had isolated the designation of alkali or acknowledge for it the functions of a basic compound; thus leaving, twelve years later, to Sertürner the glory of discovering the first alkaloid of opium who, at the same time, designated it as meconic acid, the particular acid isolated before by Séguin and called by him simply the acid of opium.

Some years later, in 1832, Robiquet isolated codeine, the pharmacodynamic study of which was effected by Barbier, of Amiens, who introduced it in therapeutics. Still later, in 1881, Grimaux succeeded in the partial synthesis of codeine by means of methylating morphine, and this synthesis was the point of departure of a study concerning the homologous ethers of codeine, among others, ethyl and amyl-morphine. Bochefontaine, at this period, undertook a pharmacodynamic study of ethyl morphine which was to reappear twenty years later, under the name of dionine, with great acclaim of Germanic publicity.

I shall only mention here, in closing my references to opium, the classical researches of Claude Bernard upon its alkaloids and the recent studies, in the comparative pharmacodynamics of morphine and apomorphine, published in 1898 by L. Guinard.

Modifiers of Heat Production

Among the drugs modifying heat production, quinine and cinchonine were isolated, in 1820, by Pelletier and Caventou. The employment of quinine, utilized first by Double in the treatment of intermittent fevers, was to some extent codified by Maillot who applied it in the treatment of malaria in Algeria. In 1884, Grimaux succeeded in its partial synthesis by methylating cupreine, the free alkaloid of the remijia (cuprea), and he described, at that same time, the homologous ethers (ethyl-, propyl-, butyl-, and amyl-cupreine). The pharmacodynamic study carried out by Laborde shows that these compounds are analogous to quinine but that the action of quinethyline and of quinopropyline is more marked. The therapeutic experiments of Bourru confirmed that which physiologic experimentation had permitted to predict.

We must mention here, with respect to the therapeutic uses of the preparation, by Barreswil, the first tasteless derivative of quinine, namely, the tannate which afforded to Orfila, Bussy and Bouvier the subject for a report to the Academy of Sciences.

Cinchonine, introduced into therapeutics by Chomel, Double, and Dufour, was the object of a pharmacodynamic study made by Laborde and completed as to its practical applications by the investigations of the English Commission in India.

It is impossible to leave the subject without recalling to mind the remarkable researches of Briquet on quinine and the cinchonas, as well as the work of Druault upon quinine blindness, showing the elective influence of quinine upon the cells of the ganglion layer of the retina and the optic nerves; this is the first and remarkably definite example of the localization of a decided toxic action always affecting the same part of a group of cells of the same anatomical system.

Among the derivatives of phenol, it is necessary to mention antodyne (phenoxypropenediol of the new terminology) which was obtained by Fourneau and is endowed especially with analgesic properties, and also, among the aromatic amino derivatives, the semicarbacides of Lumière and Chevrotier. The idea that led to the production of cryogenine was based upon the desire to utilize the great antipyretic power of the hydrazines by attenuating their severely injurious action upon the red blood cells. The derivatives obtained by the action of carbonyl chloride without heat upon the hydrazines are the carbazides or hydrazenic ureas whose toxic power is considerable.

By condensing the hydrazines with urethane, one obtains the semicarbazides containing only one single molecule of hydrazine, and the most frequently used representative of these, namely, metabenzamidosemicarbazide, or cryogenine, is a remarkable antipyretic that is almost free from toxic properties.

The derivatives of aniline, certain representatives of which enjoy at the present an

extraordinary therapeutic vogue, were studied by Dujardin-Beaumetz and Bardet who discovered that the antiseptic properties were especially marked in the hydroxyl derivatives of the phenols, while the antipyretic qualities were found to predominate in the nitrogen derivatives, and the analgesic properties were especially the quality of the alkylamines. Bardet studied more especially, in this respect, the methylacetanilid or exalgine.

If it is true that the arsenate derivatives now employed in therapeutics must be grouped about the arsenobenzol, prepared by Michaelis, in 1882, it is no less certain that their discovery and their use in practice originate from the discovery of arsenic anilid, prepared by Béchamp, in 1863, and described by Ehrlich as aminophenyl arsenic acid.

Atoxyl (aminophenylarsenate of sodium) was employed first, by Mesnil and Nicolle, in sleeping sickness and the various trypanosomiases; in 1907, Salmon used it in the treatment of syphilis. The following year, Levaditi discovered that atoxyl is reduced by the tissues and that in this condition it possesses trypanolytic powers that are particularly pronounced. This experimental discovery, which had a decisive influence upon the planning of the work of Ehrlich, Jacoby, and others, induced Ehrlich to employ reduced arsenic derivatives in the sterilizing therapy of syphilis starting from phenylamine.

This was the origin of "606", improperly called arsenobenzol, and of all the analogous compounds: hectine, galyl, and others, that have been obtained, since, by Mouneyrat.

In closing my remarks upon the antipyretics and analgesics, I shall only mention salicine which was isolated by Leroux, in 1830, and which became the origin of all salicylic derivatives, as well as the studies of Gerhardt and Cahours upon the salicylic ethers; while the pharmacodynamic properties of these compounds were determined by the investigations of Germain Sée, in 1876.

Pure aconitine was first obtained by Duquesnel, in 1871, and its pharmacodynamic study was carried out in a masterly fashion several years later by Laborde. The work of the English pharmacologists, and especially that of Th. Cash, Wyndham Dunston, and Reed, in time confirmed and enlarged upon the observations of the French scholars.

General Hypokinetics

In this group, the study of jaborandi was accomplished by Gubler and Rabuteau. Pilocarpine was isolated by Hardy, while Vulpian called attention to other active principles acting upon the myocardium beside this alkaloid. Colchicine, isolated in pure condition by Houdé, became the object of a remarkable pharmacodynamic study of Laborde.

Drugs with Neuromuscular Action

Veratrine, isolated by Pelletier, was studied pharmacodynamically by Magendie.

Among the heart poisons, digitalin, prepared first in pure state by Nativelle, was studied pharmacodynamically and clinically by Vulpian, Potain, François-Franck, and Huchard. The principal contribution that the Germans made to its study was, to call it digitoxin and to dispute most of the results obtained by French scholars. Sparteine, isolated by Stenhouse, in 1851, was introduced in therapeutics by Germain Sée, and its pharmacodynamic study was effected by Laborde.

Among the drugs that modify the circulation, ergot (from rye) furnished to Tessier, in 1777, the subject for a very remarkable study of ergotism, and Tanret was the first to isolate from it two definite alkaloids, namely, crystallized ergotinine and amorphous ergotinine, or ergotoxine.

The active principle of the adrenal capsules was pointed out first of all by Vulpian in 1856, while, in 1896, Dor ascertained the hemostatic properties of the extract of these glands, the physiologic study of which was carried out the following year by Langlois and Camus. One must not forget in this connection the researches of Josué, in 1903, upon experimental atheroma. French authors, moreover, have quite recently called attention to the splendid effects of the ingestion of small amounts of adrenalin in suppressing the sometimes so intense reactions that follow upon the intravenous injection of colloidal metals, of arsenobenzols, or of quinine salts.

Léger isolated hordenine from barley roots, the pharmacodynamic study of which was undertaken by Camus.

The analogy in chemical constitution between adrenalin, hordenine, and paraoxy-

phenylethylamine (existing in ergot) all of which are phenols with a lateral amino chain, induced the investigators to search for synthetic products that were built upon this type. This formed the basis for the studies of Tiffeneau who took up and completed the investigations of Cushny, Schultze, and Berger and Dale, and who divided these compounds in isomeric or homologous adrenalins, adrenalones, and desoxyadrenalins.

The mistletoe and its active principle were studied in my laboratory by Chevalier and Gaultier. Amyl nitrite, discovered by Balard, in 1844, became, in 1873, the object of an important pharmacodynamic study by Amez-Droz.

Depressants and Stimulants

Among the depressants, bromine, discovered by Balard, in 1826, was introduced by Debout in therapeutics, as a sedative, in the form of potassium bromide. Solanine, isolated by Desfosses, was studied pharmacodynamically first by Magendie, then by Bardet and Gaignard in the laboratory of Dujardin-Beaumetz.

The contributions by French scholars to our knowledge relative to the reflex stimulants are considerable. Pelletier and Caventou isolated strychnine and brucine in 1822. The poison of the strychneæ was was studied pharmacodynamically by Magendie, Claude Bernard and Vulpian. Picrotoxin, isolated by Boullay, in 1811, from fishberry was studied pharmacodynamically by Orfila in 1812, and again recently by Brown-Séquard. Already in 1807, Goupil had made a very interesting investigation concerning the influence exercised by this berry, upon fish, and the study of the active principles was taken up again in 1827 by Pelletier and Couërbe. Vulpian discovered the elective action of picrotoxin upon the medulla oblongata which differentiates it clearly from strychnine. It is necessary to mention, further, the important work published, in 1901, by Guinard and Dumarest, entitled "Experimental Studies Upon the Pharmacodynamics of Fishberry and of Picrotoxin."

Yohimbine was discovered by Fourneau in the bark of quebracho. Ibogaine, isolated by Landrin in 1900, was studied pharmacodynamically by Pouchet, Chevalier, Phisalix, and others.

Investigations of Ch. Richet have shown that the group H_3 is a convulsant and remains such when one or several of the hydrogen atoms attached to the nitrogen are replaced by more or less complex radicles, realizing thus the constitution of the alkaloids. This investigator estimates that the total physiologic action of an organic molecule containing basic N is the result of interactions which are established between the factors in the animal organism and the two fragments of the basic molecule: on the one part, an ammoniacal residue, on the other part, an hydrocarbonated radicle. With the assistance of suitable methods of experimentation, one often can dissociate this total physiologic action and eliminate one, at least, of the elementary actions of the two fragmentary constituents of the molecule. For instance, artificial respiration practiced upon a dog poisoned by a sufficient dose of conicine, inhibits the initial severe effect of intoxication, that is to say, death by asphyxiation. The production of convulsive attacks is thereby permitted to take place, either spontaneously or induced though the animal remains under the influence of a persistent narcosis, showing that the nervous system is under the influence of the octane. Conicine is, indeed, a secondary amine derived from the normal octane and this latter narcotizes the dog. Starting from these results, my associates Brissemoret and Joanin concluded that morphine must derive its constitution from hexahydrophenanthrene and not directly from phenanthrene, because hexahydrophenanthrene produces intoxication-phenomena in the rabbit that are almost entirely identical with those observed in this animal by means of morphine.

The work of Cahours, Jolyet and Pélissard upon the quaternary ammoniums is classic like that of Vulpian and Rabuteau upon phosphonium.

In the group of bitters, Tanret studied the pharmacodynamics of gentiopicrine. He isolated all the soluble constituents of gentian, giving thus for the first time almost to completion the chemical composition of a plant extract.

[*To be concluded.*]

Some Things the Civil Surgeon Has Learned from the Surgery of War

By GEO. W. GREEN, M. D., Chicago, Illinois
Attending Surgeon, Ravenswood Hospital, Chicago

IT has been said: "There is no great catastrophe without some benefit arising therefrom."

From a perusal of the writings of, and personal interviews with some of the leading surgeons at the front, one is forced to the conclusion that civil surgery has gained much from the surgery of the war.

First: Civil surgeons have learned that intelligent and systematic cooperation under the personal direction of a master surgeon was absolutely necessary in order to accomplish the best results in any particular line.

Injuries of the Joints

It has brought into prominence, emphasized, and clarified the best methods of treating certain kinds of wounds. Some of these principles, such as, immediate operation for all abdominal wounds without waiting for recovery from shock, have been known and taught for years by a few prominent surgeons, but, now, they are so well grounded that they will be used by all the leading surgeons. Many of these principles are new. The modern surgery of the joints is one of these. Duval[1] says: "Among the different kinds of war wounds, there are few the treatment of which has undergone such a radical and satisfactory change as has that of wounds of the joints. During 1914 and 1915, in war wounds of the knee, the deathrate was 27.6 percent; during the same period, amputation of the thigh was done in 30 percent of the cases. During 1916 and 1917 and 1918, the deathrate was 0.9 percent and amputation was done in 2.8 percent of the injuries. In 1914 and 1915, a soldier wounded in the knee usually was either sent immediately to distant parts of France or operated upon at the army hospital, by simple arthrotomy and drainage; from 1916 on, such injuries were operated upon in the lines by complete surgical cleaning and immediate suture. Thus, for the practice of late operation and simple drainage, there was substituted immediate operation and complete closure of the joint.

"Immediate suture of a joint, that of the knee for instance, was done the first time, in 1915, by Delore, of Lyon; in 1916, during the battle of Verdun, it became the general practice of Loubat; and, during the battle of the Somme, July to December, 1916, this practice became the rule."

The treatment of suppurating joints, as outlined by Willems[2], certainly reads like a novel to me. His treatment, whether of suppurating or recently injured joints, summed up in a few words is "wide arthrotomy followed by immediate active mobilization"; and he teaches that the expression "immediate active mobilization" must be taken literally. As soon as the patient is awake from the anesthetic, he is taught and made to move the joint by a "personnel in touch with the necessities of the treatment."

The difference in the arthrotomy is, that the recently injured joints are closed and the suppurating joints are left wide open, or at least open enough to allow free drainage. The point taught is, that active mobilization causes complete drainage and the cessation of suppuration much more rapidly than by the old method of immobilization. It also leaves the patient with a movable, instead of a stiff joint, and again, and most important, it leaves the patient in much better general health and hence a much more valuable member of the community at large.

Surgery of the Lung

Surgery of the lung has taken a long step as the result of the war. Duval[3] teaches that "a wound of the lung has the same period of infection as any other wound." The "favorable time for operation on the lung is, as soon as possible after the injury." "After thirty hours it is, as a rule, not advisable to perform any operation." He says: "Since 1916, we have treated all wounds of the lung by me-

chanical excision of the wound, complete cleansing of the pleural cavity, excision of the parietal wound and primary suture of the chest." His results seem wonderful as he compares the operated with the non-operated. He closes with the statement that "surgery of the lung has undergone complete revolution during this war. The lung no longer is an organ inaccessible to the surgeon. One can open the chest widely, expose the lung lobe by lobe, manipulate it, resect it, suture it and treat it as one would a coil of intestine in a laparatomy. Surgery of the lung does not require any of those pressure chambers which the genius of the Germans invented and their persuasion made us think necessary. War surgery has rendered surgery of the lung easy and without any particular danger. It is our earnest hope that the new field opened to surgery by the horrors of war may be utilized for the benefit of mankind."

Treating Stiff Joints

The treatment of stiff and flail joints, as taught by Sir Robert Jones of Liverpool, England, certainly has been very enlightening to many surgeons. The principle "use no force in limbering a stiff joint" is one that was well known by a few surgeons, but, enough emphasis had not been put on it to induce the majority of surgeons to practice it.

The prevention of stiff joints in fractures of the long bones, by methods of Drs. Joseph Blake, Kenneth Bulkley and others is a step in the line of progress.

Wound Infection

In the early part of the war, nearly all wounds were infected because of the length of time that elapsed between the injury and the attention given by the operating surgeon. During this era, many kinds of antiseptic solutions were used in many ways. The two about which we have heard the most favorable comment here are, the Carrel-Dakin solution and Dichloramine-T. Many claim that these accomplish the miraculous, while others condemn them.

Skillern[4] gives a series of cases treated by Dichloramine-T which are rather convincing. In the few cases in which I have had an opportunity to try it, I have been greatly pleased with the results. The solution must be correctly and freshly prepared and used in the correct strength.

As pointed out by Crile[5], the safe arrival of the patient at the goal of health depends altogether on the "sane, sound surgeon."

References

1. Duval, Prof. Pierre, Paris, France. *Surg., Gyn., & Obstetr.* Vol. XXIX, No. 3, p. 222.
2. Willems, Dr. C., Ghent, Belgium. *Surg., Gyn., & Obstetr.* Vol. XXVIII, No. 6, p. 546.
3 Duval, Prof. Pierre, Paris, France. *Surg., Gyn., & Obstetr.* Vol. XXVIII, No. 1, p. 1.
4. Skillern, Penn G., Jr., M.D. *Annals of Surg.* Vol. LXIX, No. 5, p. 498.
5. Crile, Geo. W., M.D., Cleveland, O. *Annals of Surg.* Vol. LXX, No. 4, p. 385.

Recent Advances in Surgery

By PAUL F. MORF, M. D., Chicago, Illinois

Attending Surgeon, Cook County Hospital and Deaconess Hospital, Chicago
Assistant Clinical Professor of Surgery, Rush Medical College, etc.

A CRITICAL review of the advances in surgery during the past few years brings to consideration some interesting facts. Deserving of mention, first and foremost, are the experiences gained in the war recently concluded. They are of notable importance, inasmuch as the number of cases treated was enormous, and because the opportunity to treat them along certain definite lines, under expert supervision and observation, was without parallel in civilian practice.

Accidental Wounds and Their Treatment

Let us consider, first, accidental wounds and their treatment. During the early years of the war, when trench fighting was the order of the day, the large majority of wounds were inflicted by shrapnel and shell fragments, producing lacerated wounds almost invariably contaminated with earth, portions of dirty, germ-laden clothing, frequently harboring foreign bodies such as fragments of steel, and almost without exception infected with microorganisms of suppuration and frequently also with saprophytic anaerobic germs, most important of which was the bacillus of malignant edema. The ordinary methods of treating wounds of this character, which had been in vogue in civil life, were found inade-

quate to deal with these conditions and surgeons soon looked about for new disinfectants and a more effectual means of preventing and taking care of the disastrous results of these infections. This lead to the introduction of Dakin's synthetic, chlorine-carrying antiseptics, eusol, dichloramine-T and also to the socalled Carrel-Dakin method of wound-disinfection and treatment.

The features of greatest importance in the Carrel-Dakin procedure have proved to be, the disinfecting action, the germ killing power of the Dakin's solution, but, also, of infinitely greater importance, the essential detail of laying open all parts of the wound to its action, by carrying the irrigating tubes into all the recesses of the wound and, thereby, insuring perfect drainage of the discharges. This emphasizes the old teaching in the principles of surgery, that drainage should be thorough, and that suppurating foci should be so treated that no discharges can accumulate, a princple so often lost sight of by the occasional or hasty operator. Another important fact brought out by these experiences, and one on which too much stress can not be laid, is, that poisonous and irritating antiseptics defeat their own purpose and cause more damage to the patient than harm to the invading microorganisms.

A further result of the Carrel-Dakin treatment was, the secondary closure of infected granulating wounds. It was found, when the microorganisms had been reduced to a certain minimum, as shown by the macroscopic appearance of the wounds and the microscopic examination of the discharges, that the granulating wound could safely be closed by suture instead of being permitted to heal by secondary intention. This reduces scar-tissue formation and notably shortens the length of time needed for wound repair.

These experiences bring into prominence another well-known principle of surgery, namely, that the human organism is able to take care of pathogenic microorganisms provided their number and virulence is not too great and that the injured part be otherwise in good condition for healing. These experiences led to a step that was distinctly an advance in the emergency surgery of the war, namely, the primary closure of such injuries that previously had been subjected to expectant and antiseptic treatment. As has been well said, "the disinfection of the wounds has passed from the chemist to the domain of the surgeon." Toward the end of the war, whenever possible all accidental wounds were treated by "*débridement.*" This consists in excising all the torn and devitalized tissue by careful sharp dissection, under rigid antiseptic and aseptic precautions, followed by accurate suture, bringing well-nourished tissues in apposition, without leaving any dead spaces in which blood serum might accumulate and subsequently become the culture medium for pathogenic microoganisms. The important features in this method of wound treatment, as pointed out by Gash, are, "that a wound should be subjected to a complete early mechanical cleansing before organisms have time to multiply and invade the tissues. If this is done, it matters little whether a wound is swabbed with ether, flushed with Dakin-Carrel solution or smeared with "Bipp." Eighty percent of wounds treated by excision and suture healed by first intention. Gass has even seen 88 percent heal by primary intention.

As the bacillus of gas gangrene, which so frequently caused fatal complications in the early period of the war, is dependent on dead tissue for its growth, the treatment just outlined eliminates the possibility of its multiplication, and this much dreaded infection almost disappeared when primary closure after excision was universally practiced. The lesson that the civilian surgeon can learn from these experiences is so apparent that it needs only to be pointed out to be at once thoroughly appreciated.

Joint Injuries

The treatment of joint injuries also deserves consideration. While we had been taught for a long time that joints have but a slight if any ability to take care of infection, recent experiences have shown that the synovial membranes share, to a remarkable degree, bactericidal power with the other tissues of the body. The distinguished British surgeon, Sir Anthony Bowlby, as long ago as the Boer war, in South Africa, opened a knee joint, removed a foreign body and, although some inflammation already was present, closed the joint without drainage and it remained closed without further suppuration. This treatment of joint injuries was elaborated

at the various hospitals in France and Belgium. Duval summarizes the treatment as follows:

"1. Operation as early as possible.

2. Complete operation, that is, removal of all foreign substances, total excision of the track of the missile. (Of course, it is understood that all such joints were skiagraphed and any foreign body accurately localized.)

3. Careful cleaning of fractured surfaces, suture of joints, without drainage.

4. Active, and immediate mobilization.

5. Preservation of parts to as great an extent as possible, immediate resection being limited to injuries with extensive communication."

As to results, he records the following: "In 130 cases, there were 21 immediate resections with 4 deaths; resection was not done in 104 cases. There were 86.5 percent of complete cures; 9.6 percent of comparative failures, 2.8 percent of amputations, 9 percent of deaths. During 1915, war wounds of the knee were treated by arthrotomy and drainage and cared for in our territory, with a deathrate of 2 to 5 percent. Amputation of the thigh was done in 30 percent of the cases."

A distinct departure from the recognized treatment of joint injuries was announced by Willems, of Belgium, at the Interallied Surgical Conference, in November, 1917. While we have, almost always heretofore, healed injuries by immobilization, Willems' practice is, to begin early active movements as soon as possible after operating on these cases. This is done so as to retain the function of the joint, it being claimed that immobilization tends to cause stiffness of the joint. If suppuration is present, active mobilization of the joint should nevertheless be carried out by the patient, after the joint has been freely opened. The movement of the joint will aid in the escape of the pus and emptying of the joint cavity: a result never perfectly attained by drainage tubes. It is claimed that there is little or no pain and that the function of the joint usually is retained. While this method may be classed by some as revolutionary, the results obtained by Willems and his followers are such, that it will probably prove a distinct advance in the treatment of joint injuries.

Empyema

During the winter of 1918-1919 there were unusual opportunities in the various military hospitals in the country to study the empyema question, because of the many cases developing as a complication of the influenza- and pneumonia epidemics that prevailed during that period. While it manifestly is impossible here to review critically the larger number of reports concerning this subject, a few of the conclusions that have been arrived at may be given.

1. A seropurulent fluid containing only a small number of leukocytes and, culturally or microscopically, showing the streptococcus as the predominating organism, should be treated by aspiration and not by rib resection and drainage.

2. If the exudate is distinctly purulent, and the causative organism is the pneumococcus or the staphylococcus, one of two procedures may be followed.

a. Resection of a rib and excavation of the pus, the rib resection being done under local anesthesia. The chest cavity is not irrigated.

b. A trocar is introduced and as much of the pus as possible is evacuated without allowing air to enter the pleural cavity. The pleural cavity is then washed out with Dakin's solution, after which a catheter is introduced through the trocar and clamped so that no air enters. The pleura then is irrigated, at 4-hourly intervals, with Dakin's solution which removes what pus still remains, and, it is claimed, will gradually dissolve the fibrinous masses present.

In both instances, lung exercises (blowing water through Wolff bottles) are instituted as early as possible

While one may well hesitate to give a definite opinion as to which of these two methods of treatment is the better, it would seem that the former is the more generally applicable; as to the latter, though it may readily be carried out in a military hospital with a well trained corps of assistants who treat a large number of cases daily, it is hardly designed to meet the requirements of a hospital where only an occasional case is seen. It would, therefore, seem that the first method (rib resection and drainage) would, in general, be preferable.

Treatment of Fractures

In the domain of fractures a number of advances have been recorded. One of the most notable of these is, the use of the calipers, especially the Besley modification, in fractures of the shaft of the femur, com-

bined with weight extension. The calipers find a most useful field in the treatment of fracture of the lower end of the femur this *bête noire* of the surgeon and general practitioner. Compound fractures, if seen early, are treated by *débridement* as outlined above. If infected, free drainage is provided. In both instances, the fractured bone is then immobilized in the best possible position. In the presence of infection, no attempts at bone plating, grafting, or suturing should be attempted. If malunion results, this can later be corrected after all infection has subsided.

Osteomyelitis

The modern treatment of acute and chronic suppurative osteomyelitis may also be appropriately considered here. Unfortunately, most cases come into the hands of the surgeon at a time when almost irreparable damage has come to the affected bone. The general profession has become acutely conscious of the necessity of early operation in cases of acute appendicitis, but, has unfortunately not yet reached this desirable state with respect to acute suppurative osteomyelitis. The general practitioner must learn that the sudden onset of severe pain in the neighborhood of a joint, namely, near the epiphyseal line, tenderness on deep pressure, fever of 101°-105° F. and a leukocytosis, almost invariably means an acute suppurative osteomyelitis. The x-ray at this time gives no diagnostic results. To wait until redness and swelling appear, means to wait until the subperiosteal, subfascial and subcutaneous tissues have been invaded. If this were the extent of the damage, nothing extremely serious would have occurred, but, unfortunately, by this time the suppurative process has also invariably invaded the entire diaphysis of the affected bone, and its vitality has been irremediably compromised.

The above syndrome should call for an exploratory trephining of the bone, at the junction of the epiphysis and diaphysis, under aseptic precautions. If properly done, this is in no way a dangerous procedure and may save the shaft of the bone and prevent prolonged invalidism.

As said above, the patients usually come to the surgeon when swelling and redness have appeared. Under these circumstances, the abscess, or phlegmon, should be opened widely to provide thorough drainage, and the opening in the bone enlarged if necessary. This should be the extent of the operation at this time. The limb should be immobilized and antiseptic irrigations applied. After the acute symptoms have subsided and the periosteum begins to react and produce new bone, usually about six weeks, the affected bone should be skiagraphed to determine the extent of necrosis. Then, under general anesthesia, the diseased bone should be removed (usually it is the entire diaphysis) and the wound packed with gauze and left open, the limb being immobilized in a plaster cast or other suitable apparatus. In this operation, the periosteum is carefully preserved, and it will be found that it will produce new bone, to replace that which has been removed, in from three to six months. This treatment, while it may seem radical, prevents the formation of an involucrum, which is a bony cavity lined with suppurating granulations, and which will continue to suppurate and discharge pus until obliterated even though the sequestrum be removed. If the case comes into the surgeon's hands after an involucrum has formed (3 to 12 months or longer after the acute attack) the involucrum should be widely opened, the sequestrum excised and all suppurating granulations removed. Three-fourths of the circumference of the involucrum should be chiselled away, without injury to the periosteum, and the wound packed and treated as indicated above. If only a small cavity remains, in the chronic cases, e. g., at the lower end of the femur, this, after being cleaned out, may be obliterated by transplanting into it a pedicled skin flap, from the surrounding parts, a procedure which will lead to an early obliteration of the cavity, and prevent a reestablishment of the cavity. I have followed these methods of treating chronic osteomyelitis in a large number of cases and have felt no inclination to revert to the older practice, where a blood clot, iodiform wax or decalcified bone chips were used to fill the cavity of the involucrum, after removal of the sequestrum.

Transfusion of Blood

A few words may perhaps be appropriate relative to the transfusion of blood and other fluids. While this is not a new procedure, having been done as early as 1654, nevertheless, during the last few years, the technic of blood transfusion has been perfected and greatly simplified, so that it

has become comparatively common. The dangers have become known and means to avoid disastrous results are now well understood. It is of great importance to match carefully the blood of the donor and recipient, and the agglutination of each should be ascertained. A Wassermann test of the blood of the donor should be made, to determine the possible presence of syphilis infection, and, if possible, a close clinical observation should be carried out. Pemberton summarizes the indications for transfusion of blood as follows:

1. Restoration of the bulk of the circulating fluid as after acute hemorrhage.
2. Provision of oxygen and assimilable pabulum for the tissues.
3. Increasing coagulability as in jaundice and hemophilia.
4. Stimulating the hematopoietic organs, e. g., chronic anemia, pernicious anemia.
5. Increase of resistance to infection by the antitoxic and bactericidal powers.

Unfortunately, a donor whose blood has been tested by a Wassermann and which has the same coagulability as that of the patient for whom it is needed, is not always to be found in emergencies. Therefore, in shock due to hemorrhage, resort must be taken to other means. It is, therefore, gratifying that experiments and clinical tests have been made with other fluids and with some measure of success. As is well known, physiological salt solution does not have any lasting effect on the blood pressure when transfused, as the water so introduced quickly leaves the blood vessels and enters the lymphatic vessels and spaces. This has led to the use of gum-acacia solution which has shown itself to be of some value. It cannot, however, be looked upon as a substitute for blood but, rather, only as a succedaneum, to be employed when the blood itself can not be obtained.

BIBLIOGRAPHY.

1. Empyema Commission. Cases of Empyema at Camp Lee, Va. *Journal A. M. A.*, Vol. 71, Nos. 5 and 6.
2. Blahe. Influence of the war upon the development of surgery. *Annals of Surgery*, Vol. LXIX—5.
3. Crile. Employment of calipers in fractures of the Femur, *Journal A. M. A.*, Vol. 72, No. 11.
4. Dehelly. Surgical closure of wounds. *Annals of Surgery*. Vol. LXVIII, No. 4.
5. David. Gunshot injury of the knee joint. *Annals of Surgery*, Vol. LXX, No. 3.
6. De Kruif. Experimental researches of the effect of intravenous injections of gum-salt solution. *Annals of Surgery*, Vol. 69, No. 3.
7. Diederich. A review of the treatment of Purulent Pleuritis (Empyema) at Camp Pike Base Hospital. *Surgery, Gynecology and Obstetrics*, Vol. 28, No. 4.
8. Duval. The treatment of war wounds of the joints. *Surgery, Gynecology and Obstetrics*, Vol. 29, No. 3.
9 Erlanger. Hypertonic Gum Acacia and Glucose Solution in the treatment of Traumatic Shock. *Annals of Surgery*, Vol. 69, No. 4.
10. Metcalf. The initial treatment of war wounds involving the knee joint. *Annals of Surgery*, Vol. 69, No. 3.
11. Martin. Physical factors influencing infection. *Annals of Surgery*, Vol. 68, No. 4.
12. McWilliams & Hetzel. Report of 82 cases of knee joint war injuries. *Annals of Surgery*, Vol. 70, No. 3.
13. Pemberton. Blood Transfusion. *Surgery, Gynecology and Obstetrics*, Vol. 28, No. 3.
14. Pool & Jopsnn. Treatment of recent wounds of the knee joint. *Annals of Surgery*, Vol. 70, No. 3.
15. Ross. Treatment of Pneumonia Disturbance Complicating Influenza. The Transfusion of Citrated Immune Blood. *Journal A. M. A.*, Vol. 72, No. 9.
16. Skillern. A series of war wounds treated with Dichloramine-T. *Annals of Surgery*, Vol. 69, No. 5.
17. Willems on Mobilization in the Treatment of Intra-Articular fractures. Editorial Comment. *Annals of Surgery*, Vol. 69, No. 2.

The Scope of Antigen (Vaccine) Therapy

By W. M. CROFTON, M. D., Dublin, Ireland

Visiting Physician, Royal National Hospital for Consumption in Ireland

[*Concluded from December issue, page 848*]

Cure of Mucous Colitis

The last intestinal case is adduced to illustrate the success of this method in a disease that not even the surgeons can successfully remove; namely: mucous colitis. I have had to treat a considerable number of these cases, and all these patients were cured.

Mr. C., a medical student, consulted me in June, 1917. He had had mucous colitis for two years and had been told that he probably would have it for the rest of his life. It began after a severe chill when riding a motor bicycle, the chill being followed by an attack of diarrhea. He had postnasal catarrh and was very miserable and neurasthenic. Micrococcus catarrhalis and streptococci were isolated from his postnasal catarrh, colon-bacilli from his feces. I started him on 2½ million of each of these microbes and ended with 500

million of each. He was then completely cured of his postnasal catarrh and also of his mucous colitis, and he has remained well.

There are two types of kidney infections to be illustrated one in which there was pus in the urine, the other, where there were only albumin and tube-casts.

Mrs. K., aged 35, complained of passing blood from her bladder and of a severe irritation and pain at micturition. I found her right kidney enlarged and tender and tubercle-bacilli and streptococci in her urine. She was inoculated, alternately, with tuberculin (H. T. S.), beginning with 0.000,000,1 mg., and her streptococcus-antigen. I increased to 0.01 mg. of H. T. S. and 500 million streptococcus-antigen. The reactions, focal and general, were controlled with the radium-iodine compound. I have examined her urine several times, at intervals. There no longer is any enlargement or tenderness of the kidneys. There also is no abnormality of any kind in the urine, either on chemical, microscopical or bacteriological examination.

Cases of chronic nephritis, when recent, sometimes respond very rapidly to the method.

A young policeman, under the care of Doctor Kirkpatrick at Doctor Steevens' Hospital, had a marked amount of albumin in his urine. I isolated staphylococcus aureus. His initial dose was 25 million, and, when he went home three weeks later, his urine was albumin-free.

Miss I. B., aged 14, was a much more difficult case. When I saw her, her feet and face were edematous and she had 1 per thousand of albumin, by the Esbach test. Eight months before, she had had scarlet-fever. I isolated staphylococcus aureus from her urine and began with a dose of 25 million. It was most interesting to follow the reactions which were demonstrated by the increase of albumin. I increased her dose to 300 million, and she then was albumin-free.

She went away for a fortnight's holiday, but, stayed away much longer; when she came back, she began to menstruate and I found after it that there was a return of the albumin. I made a fresh culture and found the same microbe. She has now no albumin in her morning-catheter-specimen and only a trace in the last two evening-specimens that I examined after her going about all day. Her last dose was 3,000 million. I intend to raise the dose much more.

Cases of chronic prostatitis, with its accompanying gleet, after gonorrheal infection, are exceedingly difficult to deal with by ordinary methods. I can recall only one case of failure among many cases.

Mr. M's. was a typical case. He had had gonorrhea eighteen months before he was sent to me by the surgeon who was treating him. He was in a very depressed mental state, owing to the fact that he was engaged to be married and the woman was wondering why he kept on putting off the wedding. He had been given a course of gonorrheal antigen, but, had not improved.

I isolated diphtheroids and small Gram-negative bacilli from the discharge after massage of the prostate. The gonococcus did not grow, so he had to have stock gonococcus-antigen. He had received up to 100 million stock gonococcus-antigen before I saw him; so, his first dose was 200 million gonococcus and 2½ million, each, of the other microbes. His final dose was 1000+250+250. He was able to marry in six months and is now the cheerful father of several children. Periodic massage of the prostate is desirable in these cases.

The treatment of acute intrauterine infections with microbial antigens is so firmly established, largely by Doctor Rowlette's work at the Rotunda Hospital, that I need not report such a case. The treatment of chronic endometritis and cervicitis in this way is hardly used at all. The following case was sent to me by Doctor Glennin in February, 1911. The woman had been operated upon three times for recurrent cancer of the vulva. She had an irritating vaginal discharge from which bacillus coli was isolated. The initial dose was 5 million and the final dose, 1000 million. Subsequently she had a course of autogenous staphylococcal antigen for boils. The vaginal discharge dried up completely and she has had no recurrence some years later.

Infected lymphatic glands in the neck often are exceedingly hard to treat. The infection is most commonly a mixed one, containing the tubercle-bacillus and some other microorganisms.

Miss F., I first saw two years ago. She had numerous enlarged glands on both sides of her neck, which were constantly breaking down and having to be evacuated.

She first had a full course of tuberculin (H. T. S.) up to 0.01 mg. The glands still swelled up occasionally and softened. From one of these, I isolated staphylococcus albus and a diphtheroid bacillus. Her initial dose was 100 million staphylococcus and 2½ million diphtheroids, and the final dose was 10,000 million+400 million. She has had no further recurrences.

In conclusion, I will describe two cases of fibrositis. One patient, an elderly gentleman whom I saw in February, 1913, gave me the following history. He had got gradually stiff all over during the previous July, all his muscles seeming to be affected. He could hardly turn his head, could walk only stiffly and slowly, or put out his hand with difficulty to shake hands. His joints were not much swollen, the trouble mostly being extraarticular. He had pyorrhea and was constipated. He had received all sorts of treatment—guaiacol carbonate, radiant heat, a long course of massage and baths at Bath, and had been ordered to Egypt as a last recourse.

I made an antigen from his gums and feces. His first dose was 5 million streptococci and 5 million colon-bacilli. He improved but slowly at first, and then came to a standstill, until I gave him sodium citrate, to counteract the acidosis exhibited by the heavy deposit of urates in his urine. He then improved rapidly. He also was given thiosinamin-ethyl iodide, with a view to softening the fibrous tissue, and, later, exercises and massage. His final dose was 500 million+500 million. I saw him a week or two ago. His movements now are perfectly free and he can play golf and billiards.

The last case to be mentioned is, I think, interesting. Mr. D., aged 35, had been invalided out of the army for injury to his right knee. He had been under surgical treatment for months, but, was no better. The x-rays proved the bones and cartilages to be normal. Massage, he said, always made his knee worse. He told me that an operation had been strongly recommended to him, but, that he was not keen to submit to it.

I found that he had postnasal catarrh and signs of intestinal indigestion, and I told him I thought it possible that a rheumatic infection had got hold of his injured knee. I isolated micrococcus flavus and streptococci from his catarrh and bacillus coli from his stools. My suspicions were confirmed by the fact that he had focal reactions in his knee after the first few injections. The first injection contained 2½ million of each of the microbes and the last one contained 1000 million of each. He was then able to play tennis. He rejoined the Army.

I have now finished this long recital and I do hope that you will conclude that I have demonstrated that the method in question can succeed in cases in which there is fever, as also in chronic infections of many kinds. One could easily have multiplied instances of success in all kinds of different infections, were it necessary to do so.

Classification of Rheumatism and Treatment of Each Type

By THOMAS G. ATKINSON, M. D.
Mudlavia Sanitarium, Kramer, Indiana

DURING the time that I have been at Mudlavia (a year and three months), I have seen some three thousand cases of rheumatism of every kind, from simple intestinal toxemia to arthritis deformans. Mindful of that conundrum about the pigs at a gate, I am bearing in mind, of course, that ten thousand cases would afford a wider range of experience than do three thousand. Still, the latter number of cases, when properly classified and studied, suffices to warrant a respectable group of conclusions; enough, at all events, to overturn several pet notions concerning rheumatism with which I was obsessed before I came to Mudlavia. I had no set intention, at all, of writing this article; it has, so to speak, written itself. I have not

sought the conclusions; they unfolded themselves to me, until they stared me in the face.

Here, at Mudlavia, we make a sincere and earnest attempt to solve the problem of each patient's individual case by every diagnostic means at our command, clinical and laboratorial, including roentgenographic. In the carrying out of this policy, every one of these rather more than three thousand cases has come under my personal scrutiny and study, together with all the information afforded by systematic tests and reports and records. Eventually, such a continuous panorama of symptoms and phenomena scarcely could fail to arrange itself into certain well-defined elements.

In the first place, I thought, when I undertook this work, that the chief point of differentiation between the types of rheumatism would, certainly, be found in the uranalyses. However, experience has demonstrated that this is not so. I do not say that there are not urinary findings that belong to the pathologic picture of any particular type of rheumatism; on the contrary, I do think that there are. Rather, I assert that these findings are so mixed up with all forms of rheumatism as to afford no distinct line of demarcation. Thus, there is no doubt, for instance, that high urinary acidity and indicanuria are pretty constant attendants of autotoxic rheumatism. However, high urinary acidity and indicanuria are so frequently present in other types of rheumatism that, of themselves, they constitute no decisive sign. And the same may be said of the urinary finding in virtually every other pathologic condition.

Three Types of Rheumatism as Based Upon the Blood-Count

It is in the blood-count that we have found the most constant and distinctive points of differential diagnosis. I have, indeed, been astonished at the regularity with which the different blood-findings have associated themselves with the corresponding types of rheumatism—so that I have come to rely upon them often in the face of seemingly contradictory data from other sources. By the same token, this significance of the blood-count eventually led me to revise my ideas upon the rather cut and dried doctrine of focal infections both as to the role of these infections in the disease-process and also as to their own nature and manifestations. I shall have a little more to say on this point presently.

Briefly, our experience at Mudlavia has led us to distinguish three general types of rheumatism; namely:

1. Autotoxic rheumatism, the result of long-continued seepage of toxic substances from various parts of the body, and which are the product of perverted metabolism.
2. Active infection, owing to invasion by pathogenic microorganisms.
3. Arthritis, caused by deep-seated chronic systemic disorders.

Cases of Type One

The first class embraces autointoxication of every description, including many of the conditions commonly classified as focal infections. Constipation, intestinal stasis, colitis, gallbladder diseases, rectal and anal ulcers and ulcerated hemorrhoids, pyorrhea and ulcerated tooth-roots, catarrhal noses and infected sinuses—these are some of the more frequent sources of autotoxic rheumatism, which mostly is a form of toxic neuritis, rather than a genuine affection of the joints. It is true that many, if not all, of these conditions are, strictly speaking, mixed infections, in which pathogenic germs play a part. But, it is also certain that the body has established a perfect tolerance to these germs and their activities; for, in none of these cases does the blood-count show any increase of leukocytes, either absolute or relative, nor is there any lowering of the white cells. In fact, in such cases, the blood-count is normal.

Thus, we are confronted by one of two conclusions: either a mixed infection to which the blood registers absolutely no reaction indicative of resistance or of exhaustion, yet, nocuously active enough to cause severe disturbance; or else the bacterial infection (whatever it may have been at one time) has ceased to be the real factor, the disease-picture being caused by perverted metabolism and autotoxic seepage.

That the latter is the more reasonable conclusion, is borne out by all the other clinical evidence in this group of cases, including the therapeutic evidence. These patients exhibit none of the pathognomic signs of foreign invasion; nor do they react in the least to any kind of bacterin, even autogenous bacterins, with, perhaps, the single exception of an occasional reac-

tion to the colon-bacillus. On the other hand, they invariably show abundant evidence of autotoxemia and virtually always respond nicely to vigorous eliminative and intestinal antiseptic treatment. They are, in fact, the class of cases in which the Mudlavia-treatment is most conspicuously successful and upon which this institution's reputation is most strongly based.

I would not be understood as ignoring or even as belittling the socalled focal element of infection in these autotoxic cases or the importance of attending to it. We repeatedly have instances here of patients whose rheumatism yields nicely under intensive eliminative treatment but, who decline to submit to removal or treatment of the specific focal condition, and whose trouble all reappears after a few weeks or months. However, the constant experience with these autotoxic cases has convinced us that the role of these foci is a different one from that commonly ascribed to them; that is to say, they are not the original cause of the trouble, but, foci of irritation, which become catchbasins so to speak, of toxins, and act as reservoirs for reinfection.

This explains why the removal of such foci frequently fails to effect a cure. However, by removing the focus or, as I prefer to call it, the reservoir of reinfection, thoroughly cleaning all the channels of autotoxicosis and reeducating the body to normal function, we do succeed in curing a great proportion of these cases.

Cases of Type Two

The second group includes all cases of genuine, active infection by pathogenic germs, whether in the form of a general bacteremia, exhibiting secondary manifestations in the joints, or of local inflammations of joint-membranes and structures, consequent upon bacterial attack, followed by secondary systemic symptoms. Gonorrheal rheumatism falls in this class; so does the rheumatism of pyelitis; so does the pneumococcus- and the streptococcus-type of tonsillar origin.

The last-named condition illustrates the confusion obtaining in the commonly accepted doctrine of focal infections: for, while tonsillitis and pyorrhea, for example, are both classed as focal infections that cause rheumatism, each belongs in a totally different etiologic and pathologic class, distinguished from what is ordinarily known as an ulcerated root, such as an x-ray picture discloses at the apex of a devitalized tooth.

The Significant Leukocytosis

Rheumatic conditions of this class are, as a rule, more or less acute; sometimes exceedingly so. They embrace the type ordinarily spoken of as acute inflammatory rheumatism. All these patients have elevated temperature at some stage of the process; and, what is more to the point right here, they all exhibit some degree of genuine leukocytosis. This phenomenon is so constant that, as I already have said, I am almost prepared to rule out the tonsillar origin of any rheumatic state, in the face of the most powerful evidence, if the blood-count is and continues to be normal. I may mention, in passing, an acute infectious rheumatism that we have encountered quite frequently of late, following in the wake of an attack of the influenza, presumably a pneumococcus-infection

This type of rheumatism presents the frankest, simplest problem, both as to diagnosis and etiology, of all that we are called upon to treat. For, once having determined, by means of the differential blood-count, that we have before us a true bacterial infection, it is a relatively simple matter to run down, by other means, the nature and locus of the infection—pyelitis, by uranalysis; tonsillitis by examination of the throat, and so on. These patients always react vigorously against vaccines, if we can obtain a culture or if we can decide upon the proper strain of stock bacterin. Happily, these victims usually recover.

Rheumatoid Arthritis the Type of Group Three

The architype of the third group is, rheumatoid arthritis, or, arthritis deformans. I am convinced that this terrible affliction is not an infection in the commonly accepted significance of the term, but, a hydraheaded systemic disease, feeding upon all sorts and conditions of deep-seated pathology, from tuberculosis to malaria, from worms to syphilis. We have given, at Mudlavia, a great deal of attention to this disease, both because of the painful impression it has made upon us and, also, because of the opportunity afforded by a relatively large number of cases presenting themselves.

Once again I turn to the differential

blood-count for a clew to the obstinate problem.

Practically all of these subjects show a low total white-cell count and a greater or less degree of lymphocytosis—hardly sufficient to be dignified by that term, so, let us, rather, call it a slight increase in the number of the lymphocytes. The polymorphonuclears as a rule are somewhere in the fifties and the small mononuclears in the thirties or forties. This is the typical count of these patients' blood. In the few cases in which there has been a leukocytosis, it has always been possible to establish a reason for it in the coexistence of some active infection.

All other tests show as many variations as there are patients. Not a one of them, in our experience, has in the least reacted to any kind of vaccine; and we certainly have experimented enough with vaccine-treatment. I do not hesitate frankly to confess to this, since our whole attitude toward this disease is a tentative one. Nor has any subject shown the slightest disposition toward spontaneous recovery.

Eosinophilia as a Factor Syphilis Involved

Another frequent element in the blood-picture although not so constant a one as the lymphocytosis, is, a marked eosinophilia —not very high, perhaps around, say, 8 to 12 percent, yet, very persistent.

Our other experiences have taught us to associate this type of blood-count (low polynuclears, high lymphocytes, and eosinophilia) with syphilis. Consequently, it is not unlikely that, in rheumatoid-arthritis patients with this kind of count, the arthritis is owing to syphilis.

As to the question of focal infections, I am more than ever convinced that, in this form of rheumatism, they can not be regarded as first causes, but, rather, must be considered as being part and parcel of the entire disease-process.

More and more, I am being forced to the conviction that rheumatoid arthritis, so far as its pathologic nature is concerned, is essentially a nervous disease, coming about through some profound disturbance of the trophic functions of the spinal cord—something akin to the condition known as Charcot's joints.

Underneath the spinal element, of course, must lie some constitutional dyscrasia, and this is the result, in turn, of some deeprooted chronic infection. And that is precisely the picture presented by every one of the numerous cases of arthritis deformance studied by us at Mudlavia.

I am well aware—only too painfully aware—that such a view of the matter does not add much to our present meagre resources in dealing with the disease. But, if this be a correct view, it, at least, materially narrows the field of our research; for, there are only a very few diseases known to medicine that are capable of producing such a profound constitutional dyscrasia as we have in mind. We, at Mudlavia, purpose to follow up this clew, and hope to be able to report something definite, one way or the other, at the end of another twelve-month.

Among the numerous cases that come to us self-labeled as "rheumatism," we uncover, of course, a large number of conditions that are not rheumatism at all.

As to the Treatment

A few words concerning our treatment of the various types of rheumatism, whatever the type. We put every patient in the mud-bath, with three exceptions; namely: (1) those having extremely acute attacks, where the temperature and pulse are running high, (2) extremely exhausted patients, and (3) tuberculous patients.

Concerning the first two of these exceptional cases, we wait until conditions are a little more favorable before sending them to the bath; tuberculous patients we never put into the bath, experience having shown that the baths are injurious to them. We do not, in fact, keep tuberculous patients in the house at all. With these exceptions—two of which are only temporary ones—we subject all rheumatic patients, of whichever type they may be, to the mud-bath. This we do, not, with the indiscriminate idea that the baths are a panacea for all the ills that flesh is heir to, but, because experience has proven that every type of rheumatism is benefited thereby.

Even from the most obvious point of view, that of regarding the mud-bath sheerly in the light of a huge poultice, it is easy to understand that it exerts a soothing effect in any kind of myalgia or arthritis. However, there certainly is a more farreaching aspect than that alone. It is not necessary to discuss the question of medicaments possibly present in the mud, and their possible absorption into the body. Quite apart from this aspect,

there are two undoubted modes of action that amply explain the beneficial effects of the mud-bath; namely:

1. It brings about a decided hyperemia of the skin and muscles, which, in the reaction, increases the circulation of the internal organs.

2. The stimulation of the sweat-glands, according to a well-recognized physiologic principle, brings about a general stimulation of all the glands in the body.

However, both of these processes induced by the mud-bath are curative processes, particularly in those pathological conditions that underlie all three types of rheumatism.

The best and quickest average of results occurs, naturally, in the acute infectious cases, especially in young adults suffering from their first attack.

As a matter of course, we supplement the baths with eliminative and alkaline treatment; but, the patients certainly seem to require less of this than I ever have seen in private practice, without the aid of the baths.

We also employ, whenever practicable, vaccine-treatment, using either stock or autogenous bacterins, the efficacy of the bacterin-therapy undoubtedly being enhanced by the effect of the baths upon the circulation. Gonorrheal rheumatism is, of course, obstinate and difficult to cure. When the tonsils are the source of infection, we remove them, provided the patient consents.

Striking Results in Autotoxics

It is in the autotoxic cases, however, that the special and peculiar benefits of our treatment are conspicuously manifested. The results are not so rapid nor so cleancut as in the acute infectious forms, but, they are much more striking. Even without any other treatment—quite a number of patients decline any other treatment—it is remarkable to see how, under the mud-bath elimination, and the gland-stimulation, these patients steadily and uninterruptedly improve. With proper supplementary treatment, the improvement, of course, is prompter and more satisfactory.

Virtually all of the patients in this class have high urinary acidity and indicanuria. (For that matter, as I said at the outset, so, also, do many in the other two classes.) Indeed, in many of the autotoxic class of rheumatic patients, this seems to connote the extent of their trouble, and, as soon as these two conditions are removed, they are cured. A few weeks of quiet wholesome living, such as they get at Mudlavia, mud-baths, antiacid treatment (we generally give them the combination known as "sodoxylin" and containing antiseptic and alkaline drugs, with colchicine, and so on; also, we order the combined intestinal antiseptics), usually do the work; after which, we try to teach them how to live so as to avoid similar trouble in the future. Habitual constipation, of course, is common, in this as in all the types of rheumatism; still, I must confess that it is not as universal or even as frequent as I had expected to find it.

It is in this class of rheumatism that the socalled focal infections—which I have ventured to rechristen foci of irritation and reinfection—play so conspicuous a role. At all events, in this class of cases, the removal of such foci results in the most direct and noticeable improvement. Restriction and regulation of diet, especially the elimination of meat and sugar, and, so far as practicable, of all foods that are likely to give rise to toxemia or intestinal fermentation. We urge these patients to drink plenty of pure spring-water. This large intake of water and the profuse sweating induced by the baths creates a continuous passage of water through the blood and tissues; and this, of course, is of great benefit.

Concerning the treatment of rheumatoid-arthritis patients I am very diffident. In common with everyone else, we have no definite medicinal treatment for this disease. In general, we find that improvement in the patient's resistance is, roughly speaking, proportionate to the increase of their leukocytes, which often, though not always, is brought about by intravenous injections of sodium cacodylate. Recently we have been adding quinine dihydrochloride to the arsenic, with, apparently, better results. We resort, of course, to every hygienic and dietetic measure designed to increase resisting-power.

The mud-baths, themselves, after all, appear to be the best friend of these unfortunate patients. The baths have a marked effect in soothing the pain, quieting the nervous system, and increasing the mobility of the joints. The great trouble with most of the patients, is, as may be surmised, that they do not continue long enough. They remain a few weeks, become discouraged, and quit, in quest of

something else. Still, some of them show commendable perseverance and constancy; and, in quite a respectable proportion of the cases, especially among the younger patients, there can be recorded a really gratifying improvement.

Summary

1. The crucial means of differentiation between the different types of rheumatism is the differential blood count.

2. Tried by this touchstone, rheumatic cases fall into three general classes, (a) autotoxic, due to seepage of body toxins, (b) genuine infectious, due to invasion by pathogenic bacteria, and (b) rheumatoid arthritic, due to, or at least grafted on, some deep-seated chronic dyscrasia.

3. In the first group, the blood count is normal; in the second, there is leukocytosis, total or relative or both; in the third, there is a diminution in polymorphonuclears, an increase in lymphocytes, and frequently an eosinophilia.

4. The socalled focal infections must be discriminated according to this classification. Some of them are foci of actual pathogenic germ infection, others of autotoxic seepage.

5. Where the foci are the portals of genuine germ invasion they are, as a rule, the originating cause of the rheumatism; where they are merely points of body seepage they usually represent local manifestations of the systemic disorder, and act as points of irritation and reservoirs of reinfection.

6. When the focus is one of genuine pathogenic invasion, its removal is usually followed by recovery and no return of the rheumatism. Where it is a reservoir of reinfection, its removal can be regarded only as a secondary help to recovery, and does not always produce any noticeable result.

7. In arthritis deformans, the removal of the socalled local infections does not appear to have any effect whatever upon the disease.

8. There is a good deal of ground for supposing that the pathology of arthritis deformans is in the nature of a profound disturbance of the spinal trophic function. Investigations are now being made at Mudlavia along this line.

9. Mud-baths influence rheumatic and other toxic conditions in two prime ways: (a) by increasing the circulation to the internal organs, and (b) by stimulating, through the sweat glands, the glandular activity of the body.

10. Vaccine therapy is greatly enhanced by the mud baths.

Pyorrhea—Its Causes and Cure

By THOMAS J. RYAN, D. D. S., New York City

PYORRHEA is an inflammation of the dental periosteum, developing pus and progressing to the decay of the alveolar process and the final loosening and loss of the teeth. Whether pyorrhea is caused by germs or whether germs come because of it, is a question that is debated with all the enthusism of that hoary query: "Which came first, the hen or the egg?" We know that germs and pyorrhea always are found together, but, the order of their appearance still is a mooted point.

Ninety-five People Out of a Hundred Have It

It is calculated that ninety-five out of every one hundred people in the world have pyorrhea, which makes this disease the most prevalent of all human ailments. Even among savages, it is extremely common notwithstanding the generally held opinion to the contrary.

Writing in the *South African Medical Record*, for August 11, 1917, Colyer says: "In one thousand successive examinations of natives, ranging in age from twelve to fifty years, we found that approximately 86.2 percent had early or well-established pyorrhea, while 9.5 percent had the disease in an advanced state."

How Pyorrhea Manifests Itself

The first symptoms of pyorrhea manifest themselves in a readiness of the gums to bleed under the slightest provocation—usually, while brushing the teeth or while

removing impacted particles of food from between them with dental floss or toothpick.

As the process develops, the gums shrink away from the teeth, thereby hastening the destruction by malnutrition of the sheath and alveolar process, the bony casing, and the nutrition chamber of the tooth.

With the retraction of the gums and the shrinking of the gum tissues, the attachments of the teeth to the jawbones are loosened, and, in advanced cases, the teeth become so loose in their sockets that, sometimes, they may be rocked back and forth or even plucked out with the fingers.

Wherever the periosteum, or bony casing, is destroyed, the soft tissues attached to it are destroyed likewise, increasing the ulcerative process together with the available supply of pus and pathogenic germs.

It must be emphasized here that, where the membranes covering the roots of the teeth have been destroyed or where the gums have receded, there is no earthly hope of ever replacing this tissue by any form of treatment.

Remember, always, that the pressure of mastication squeezes the accumulated pus from around the gum margins and the roots of the teeth, whereupon it mixes with the food, and is swallowed. The pyorrhea-patient thus becomes a self-feeding, self-sustaining poison factory, constantly busy manufacturing fresh supplies of pus. These are absorbed into the circulation or carried into the digestive and respiratory tracts, there to take advantage of any lowered resistance to start the particular kinds of mischief best adapted to their germ-nature.

Try to Stimulate a Healthy Local Nutrition

If a healthy local nutrition can be stimulated, the disease process may be arrested, however, and some slight increase in the development of root-covering and gums may be expected; but, these strikingly favorable results are the rare exceptions, not the common rule.

In health, the oral mucous membranes offer a resisting barrier to keep germs from gaining entrance into the underlying tissues. The most vulnerable areas are the gingival tissues surrounding each tooth. So long as these remain in a healthy state, infection cannot break through. But, when local irritants, such as impacted and decayed food-stuffs, overhanging fillings, irritating masses of tartar, and other foreign substances excite chronic inflammation of the gingival tissues, resistance is lowered and the normal tone of the tissues is lost.

So, the various forms of gingival inflammation favor the development of pyorrheal conditions and open the way for invasion by the germs into deeper tissues and from thence into the general system.

If we could always keep the gingival tissues free from irritation and inflammation, they would invariably remain healthy.

While the treatment of advanced pyorrhea is a very difficult undertaking, the prevention of pyorrheal conditions is a most hopeful proposition. Oral hygiene, directed to restoring normal circulation to the congested gum tissues; the removal of all sources of local irritation—especially where this irritation extends down to the necks of the teeth below the gum margins—will prove most efficient in preventing the development of pyorrheal disease.

Various Sources of Irritation

As we have seen, pyorrhea has its origin in mechanical irritation, in inflammation around the roots of the teeth, particularly of the "narrownecked" variety, excited by ill-fitting crowns, overhanging margins of improperly constructed fillings, or through stony substances (called serumal calculi) deposited from the saliva or the blood stream. Extensions of the tooth enamel also press upon the gums, causing irritation and sponginess, favoring the entry of the pathological germs into the ramparts of the roots of the teeth.

I am also convinced that one of the principal causes of pyorrhea is malocclusion. The failure of the upper and the lower teeth properly to oppose one another (because of anatomical malformation of either jaws or teeth) causes a "mis-bite". A mild degree of rotation is maintained by the pressure of mastication and this continued rocking of the teeth predisposes to their loosening and to the invasion of their attachments by microorganisms.

It is a scientific fact that, when the teeth occlude perfectly, (other factors being equal) there is invariably a more healthy condition of the teeth and gums. Also, it has been my experience that, where these irregularities exist, fully ninety percent of cases have been entirely neglected

so far as concerns any constructive effort to close the spaces where teeth have been extracted and to correct the occlusion.

No dentist should feel that his work is finished when he has extracted a tooth. For, no matter what be the age of the patient, the jaw never is restored to normal until the space between the teeth has been filled and the grinding surfaces are intact once more.

It is not necessary to devitalize the teeth for the purpose of placing a bridge, as comfortable and satisfactory bridges can be built for even the most unfavorable-seeming cases, with the exercise of a little patience and ingenuity.

So, I would impress upon mothers, for the sake of the future health of their children and as one of the most certain of all methods of preventing the subsequent development of pyorrhea, that, whenever they have found it necessary to have a tooth extracted, they should make it their business to see to it that the resulting space is filled, at the very earliest opportunity, and the valuable grinding surface restored, by the insertion of a properly fitted piece of bridge-work.

Five Thousand Pounds Pressure a Day Upon Our Jaws

It must be remembered that the weight borne by the grinding surfaces of the teeth in twenty-four hours has been estimated at more than five thousands pounds. The pressure thus caused by the rise and fall of the teeth in the tooth sockets operates to squeeze any infective material, that may be present in the tooth sockets or around the gum margins, into the blood-stream and the lymph channels—to be carried through the circulation, to poison the structures of the body, and to manifest its virulence in those tissues that may show the least resistance to their invasion.

Some of the Things Pyorrhea Does To Us

Among other effects produced by pyorrhea are, inflammation of the glands of the mouth and neck, suppuration of the tonsils, abscesses of the antrum of Highmore, infections of the nose and throat, and diseases of the middle ear.

It is a fact, also, that their virulence and their power to cause injury multiplies as these germs penetrate the tissues and as they increase in numbers.

There are many, of course, who contend that pyorrhea is of systemic origin, arising in some depraved state of the metabolism or from the presence of rachitis during childhood, or of tuberculosis, syphilis, diabetes, nephritis, or diminished alkalinity of the blood.

Other authorities claim, with perhaps equally good grounds, that pyorrhea is due to a neglected state of the exudates, secretions and débris of the mouth. These authorities insist that there is no systemic cause for the development of pyorrhea other than what might predispose to any disease. In other words, that pyorrhea originally is a local inflammatory process, subsequently developing the normal germ and pus products of the inflammation.

Both of these arguments must carry much weight with the conscientious dentist, which is one important reason why the dentist should always work hand in hand with the physician.

The Meaning of Tartar

In pyorrhea, there is, usually but not always, a tendency to form tartar deposits on the teeth and especially on the necks of the teeth down below the gum margins.

This tartar is merely the result of a combination of certain secretions of the mouth mixed with mineral and organic substances derived from the food, usually in the presence of the pathological mouth acids.

By keeping the mouth secretions more alkaline, using baking soda, salt, or milk of magnesia for this purpose, much of this tendency to tartar formation can be prevented.

How to Treat Pyorrhea

As to the first need for the successful treatment of pyorrhea, there can be no question. It is necessary to scale thoroughly all calcareous deposits from the teeth, no matter how far up or down beneath the gum margins they may have extended, polishing and burnishing carefully in infected tooth surfaces.

Iodine, or some other powerful antiseptic, used locally around the roots of the teeth and at the gum margins, helps materially to asepticize the mouth, or, at least, to lower its toxic condition.

I have found also that chlorazene in one-half to one-percent strength has given most excellent results, especially when used at home by patients for its local antiseptic action.

All this is excellent and very necessary, as a beginning. But, as every dentist

knows, it is rarely curative. Hardly ever does it follow that by this treatment the pathological process clears up, that the teeth tighten back in their sockets and the gums once more become firm and healthy. Therefore, anything that will help bring about normal mouth conditions must be interesting to every dentist and to every victim of pyorrhea.

As to Bacterial Vaccines

My personal experience with bacterial vaccines is rather limited—being confined to somewhat less than a dozen cases. But, so remarkable were the results secured in these cases that I feel impelled to emphasize the value of this method of treatment to everybody who can be made to realize the great significance of pyorrhea.

The vaccine employed in my work is composed of a number of strains of streptococcus viridans, staphylococcus, pneumococcus, M. catarrhalis, and B. pseudodiphtheriæ, isolated from typical cases of pyorrhea. These bacterial growths are suspended in a sterile physiological salt solution; killed by boiling and preserved in a 0.25% trikresol solution. Each suspension is accurately standardized by standing and counting to a definite number of bacteria to the cubic centimeter.

The initial dose of these killed bacteria is, twenty-five million of each—with the exception of that of the staphylococci which is double the number of any of the others. The injection should be made deep into the biceps or triceps muscles, using the alternate arm for treatments.

Every five days, another injection is given—doubling the amount of killed bacteria in the previous dose.

No Danger from These Injections

There is but slight reaction from these injections, manifesting itself in redness and soreness at the point of injection. It usually lasts not longer than from twelve to twenty-four hours.

Following these injections, the tendency to hemorrhage on the part of the gums was checked, usually within forty-eight to seventy-two hours. The pus cleared up, the teeth tightened in their sockets, and the inflamed gums resumed their normal health aspect.

Doctoring the Doctor

One of my first cases, a physician whose gum-tissues were saturated with pus, was entirely relieved after the third treatment, and, he has no recurrence of the trouble, nor of the rheumatic symptoms from which he suffered for many years, and which, no doubt, were traceable to these foci of infection in the suppurating gums. This case was all the more remarkable because of the fact that the doctor, owing to a rush of work, had but merely a "lick and a promise" of accompanying local treatment.

Another patient was in such a condition that several of the best men in New York had advised extraction of both upper and lower teeth, insisting upon the inadvisability of, and the actual menace to health involved in, attempting to save these teeth.

This case is one of the most wonderful results of modern corrective methods I have ever seen. For, after a little more than a month's treatment, not only has the patient preserved all the teeth upon which sentence of extraction had been passed, but, these are now in splendid serviceable condition and firmly embedded in solid, healthy gum-tissue.

Tightening Loose Teeth

Another remarkable case was that of a young lady in whom the disease was so far advanced that there did not seem to be the slightest hope of ever saving a single tooth, so loose were they in the sockets.

This young woman, as might have been expected, suffered persistently from stomach trouble and rheumatism. After the second injection of the bacterial vaccine, she began to improve. The pus dried up, the gums became firm, and it has not been nor will it be necessary for her (judging from all appearances) to sacrifice a single tooth of all the number which eminent pyorrhea specialists had told her would have to be removed.

Also, she is now the happy possessor of the digestion of an ostrich, being able to eat anything at any time, and relish and "take care of it."

Rheumatism from Pyorrhea

And, her rheumatism is a thing of history. For, with the clearing out of the pus factory in the mouth, the source of the systemic pollution automatically dried up; also, with it, the symptoms for which it alone was responsible.

These uniformly favorable results have followed in virtually every case I have thus far treated. I have had experience with

most methods that have ever promised results in pyorrhea, for, I have made somewhat of a specialty of this branch of practice. I have yet to see results so definite and clearcut, from other methods, as are to be gained by the use of these bacterial vaccines.

So far as I have been able to learn, this also is the experience of other men who have conscientiously tried this new method. I have before me a letter from a Middle-West dentist who has treated twenty-eight cases, "all with very decided improvement". Twelve of these cases were "practically cured and the gums in normal condition". The other sixteen were "much relieved, and some of these continue to improve."

There is no doubt but that the treatment by means of bacterial vaccines is founded upon sound therapeutic law, and that the increase in phagocytosis and in the development of antibodies which it produces are inimical to the welfare of live brother-and-sister germs in the gum tissues and in the circulation generally.

Dr. Leon S. Medalia, writing in the *Boston Medical and Surgical Journal* (Sept. 14, 1916) says that vaccine treatment has, in his hands, given more satisfactory results in pyorrhea alveolaris than any other treatment as yet suggested. It has withstood the hardest test—time. The good results he has obtained with it have not been a question of a few weeks' or a few months' experience but have been a matter of over nine years. The actual results obtained in the 115 cases treated with vaccine, he has reported, are 92 percent cured and 8 percent improved."

These are extraordinary results. At first blush, they might seem rather heavily tinctured with ultraenthusiasm. But, after my own experience and from what I learn of the experiences of others who have tried the methods, I feel quite sanguine that the treatment is founded upon sound principles of judgment, bacteriological law, and dental horse sense. In any event, the bacterins are well worth a trial. They can not do any harm, and, they may cause the unexpected and the impossible to become routine and commonplace in dental practice.

Emetine in Pyorrhea

Dr. Eugene Lyman Fisk, Director of Hygiene of the Life Extension Institute, New York, believes that there is considerable evidence to prove that pyorrhea is frequently caused by the presence of an ameboid organism, the "entameba buccalis". The Life Extension Institute people claim that, in virtually every case examined in that Institute, these entamebæ are present, but, what is more important, that they can be destroyed with emetine, which is the active principle of ipecac.

Ipecac and its active principles seem to destroy these parasites quite as surely and certainly as does quinine exterminate the plasmodium of malaria.

The method usually employed is, to place three drops of the tincture of the wine of ipecac on a toothbrush and brush the teeth thoroughly with this amebicidal preparation. I have seen some very excellent results from this in my practice.

The "1-2-3" Mixture

Or, the "1-2-3" mixture recommended by Doctor Black may be used. This consists of

Oil of cinnamon, one part
Carbolic acid, two parts
Oil of gaultheria, three parts

—a few drops to be used on the toothbrush morning and night, followed possibly by rinsing the mouth with a solution of hydrogen-dioxide, one part, to two parts of water.

Preventing Pyorrhea

Pyorrhea can be prevented by the general care of health, and by competent dental care. The gums should be treated surgically, removing completely all deposits of calculi and tartar. The occlusion should be made normal, and lost teeth replaced.

Hard, crusty food, and green salads should be chewed, so that the teeth and gums may be given needed exercise, and the resistance of the gum structures improved.

Also, the gums should be massaged daily by the thumb and forefinger. This strips away the collections from about the gingival spaces and stimulates a healthier circulation of blood in the parts.

There is no doubt but what a wonderful amount of good can be accomplished in the treatment of pyorrhea, if this treatment is persistently and systematically followed out. However, everyone who undertakes it must realize that it is a condition that calls for the employment of skill, resource, and infinite patience.

Rectal Hemorrhage

By CHARLES J. DRUECK, M. D., Chicago, Illinois
Associate Professor of Rectal Diseases, Postgraduate Medical School, Chicago

THE discharge of blood, mucus or pus from the anus is indicative of a great many pathologic conditions and demands our careful consideration. Bleeding is so commonly associated with hemorrhoids that one is inclined to take too much for granted and to neglect making a thorough investigation. Inquiry must be made as to the amount and color of the discharge and the time at which it occurs, also whether it is mixed in with the feces or only streaks the surface of the mass.

Hemorrhage from the stomach or small intestine may be differentiated, from that exuding from the rectum, by the fact that the former contains coagulated blood incorporated with the digestive residue, while blood from the pelvic bowel is evacuated in a fresh and fluid state, and often independent of the act of defecation.

Nearly all rectal disturbances cause some hemorrhage, and the fact that an external abnormality, such as fissure, exists does not preclude disease higher up within the intestines, even cancer or ulcer being possible contributing factors.

Let us consider first those cases in which bleeding is the only symptom attracting attention.

Blood occurring after defecation or streaking the stools indicates ulceration within the anus or rectum. The hemorrhage of anal ulcer (fissure) is little in amount, but, as a rule, occurs with every defecation. The bleeding occasioned by the traumatism of the ulcerated internal opening of a fistula is small in amount and irregular in occurrence. In both of these conditions, the bleeding may be only sufficient to stain the toilet-paper. The contraction of the sphincter-muscle closes the blood-vessels and prevents much loss of blood.

Causes of Bleeding

Persistent bleeding after each bowel-movement or that occurring independent of the act of defecation indicates that the source is inside the rectum and may be:

1. Erosion or ulceration on the rectal wall, such as an ulcerated hemorrhoid, rectal ulcer (tuberculous, syphilitic, dysenteric, amebic, cancerous) or proctitic. Or,

2. Laceration of the rectal mucosa from injury by a foreign body, or a large hard fecal mass.

Sudden Hemorrhage

In some instances, a considerable amount of blood may be lost, which is expelled by prolonged dripping or by gushes forcibly ejected. Such a hemorrhage suggests rupture of a good-sized vessel and must be attended to immediately. For treatment, the patient is placed upon a table, a speculum is inserted and the colon thoroughly flushed out with a hot saline solution. All clots are to be removed, and the bleeding wound, when found, is packed. A rectal plug is made of three pieces of gauze, 4 inches wide and 6 inches long, tied into a bundle, at one end, with a long tape. This taped end of the gauze is carried, by means of a long dressings-forceps, through the speculum to a point in the rectum above the wound and the remainder of the gauze is then carefully packed in, thus filling the ampulla; the speculum then is withdrawn. Two fingers are placed over the anus and the tape passing between them is drawn taut and tied to the end of the roll of gauze remaining outside the anus. This packing is allowed to remain for twenty-four hours, which usually is sufficient in traumatic cases and also for tentative treatment in others.

Other symptoms associated with discharge from the anus are factors in the clinical picture, and are to be brought out by careful manipulation. Constipation, if acute and complete or nearly so, suggests intussusception. In this condition, the constipation may be somewhat relieved after the hemorrhage. Bleeding associated with the discharge of pus and mucus indicates obstruction because of cancer, catarrhal disease, stricture or mechanical obstruction resulting from pelvic adhesions or pelvic tumors that diminish the lumen of the intestine.

An Illustrative Case

The following case, in which rectal

hemorrhage and tenesmus were the chief symptoms, is of interest:

Patient was seen with Doctor Steele. Patient's mother died, at the age of 74 years, of cancer of the axilla. Her father, now 74 years, is in good health, but, has had five rectal operations for hemorrhoids and fistula. The patient, herself, is 40 years old, and had an operation for hemorrhoids, which bled and protruded. She enjoyed good health after the operation and had no rectal symptoms, until eighteen months ago when she began having bleeding from the anus after her bowel evacuations. This discharge was of red, fluid blood and was quite profuse when she passed solid formed stools or when she strained after the evacuation. Doctor Steele found a small ulcer on the anterior rectal wall. This he cauterized, after which the patient had no more loss of blood for two months. Then the bleeding reappeared at irregular periods, occurring, for several days, after each bowel movement, then not occurring at all for a few days. However, when the stools were kept soft, very little blood was evidenced; formed evacuations always were streaked with blood and mostly followed by bleeding. A heavy sensation was experienced in the pelvis or rectum, but, no pain.

Inspection disclosed nothing. At digital examination, the finger could be introduced its full length without encountering obstruction. Bimanually, a mass the size of a small fist could be felt in the pelvis, to the left of the uterus and above the reach of the finger.

The speculum could easily be introduced about 4 inches, when it met a firm obstruction and beyond which it could not be passed. Through the speculum, there could be seen a bulging of the rectal wall, while a probe introduced gave proof of a firm, though not solid, mass. The mucosa of the anterior rectal wall at this point was ulcerated and could easily be made to bleed. Evidently, a pelvic tumor was causing obstruction of the rectum.

A pelvic laparotomy was performed and a firm cystic tumor 2½ inches in diameter was disclosed in the left ovarian region. Firm adhesions held this mass to the rectum, pelvic wall, and broad ligament. The mass ruptured during the enucleation and there escaped an unabsorbed corpus luteum about the size of a blue grape. During the enucleation, several other of these bodies were ruptured before the sac was removed One corpus luteum of about the size of a pigeon's egg was removed complete. Following the operation, the proctoscope could be passed easily above the level of the former obstruction. There has been no bleeding since.

The bleeding occasioned by the escaping of the feces in passing the obstruction usually is small in amount and streaks the stools with sometimes a little loss of free blood after the evacuation. This is regardless of the cause of the obstruction, which may be owing to catarrhal disease, tumors of the rectum or mechanical strictures; but, where ulcerating necrosing masses of tissue occasionally are torn off by the passing mass during defecation, as in cancer, benign tumor or tuberculosis, a very serious hemorrhage may occur.

Certain fevers, including malaria, yellow-fever, and typhoid fever, often are complicated with rectal hemorrhage, marked changes in the blood, like that which occurs in anemia, purpura, scorbutus, et cetera, may produce it; and, lastly, we often meet it in local diseases of the rectum, such as proctitis, polypus, prolapsus, and ulceration, amebic dysentery being included in the class last mentioned.

Even Slight Bleeding Serious

The important fact is, that blood appearing on the stool or voided without relation to the fecal evacuations is pathological and is an imperative demand for a thorough rectal examination. The amount or character of the blood lost are not indicative of the gravity of the situation; and, although a very severe hemorrhage may demand immediate treatment, the lesser show of blood may be of more serious import and demands careful investigation.

After Thirty Years—XXI

Notes and Reflections on Life and work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

Bichloride of Mercury Poisoning

POISONING by corrosive sublimate has been somewhat frequent during the past few years. Sometimes the drug has been taken accidentally, however, most of the cases have been attempts at suicide. Fashions prevail in suicide just as in many other things. Forty years ago, opium was the favorite drug for ending life when it had become intolerable. Later and for many years, carbolic acid was taken very frequently in spite of the fact that it meant a death of dreadful suffering.

Several years ago, a prominent banker of Georgia took some tablets of bichloride of mercury, thinking that they were aspirin. A vigorous fight was made to save him, but, without success. The case attracted nation-wide attention; daily bulletins of his condition were published in the newspapers and it is no exaggeration to say that his fight for life was watched by millions of people, and there was a universal expression of sympathy when he finally succumbed.

At once, the fashion in suicides changed. Morbid people who had watched the banker's case, when they reached the point where life seemed unendurable, decided to try the bichloride route This was made easier by the fact that tablets of the poison are kept in many households for disinfection purposes, a custom for which there is no excuse as there are plenty of nonpoisonous disinfectants.

The Search for an Antidote

The frequency of bichloride poisoning greatly stimulated the search for an antidote. Hundreds of scientific men all over the country entered upon various forms of investigation, both in chemical and animal experimentation, with the object of finding an antidote for the poison, more especially after its absorption into the system. When the poison has gone no farther than the stomach, in other words, when treatment can be given immediately after its ingestion, the oldfashioned method of giving white of egg and milk and then washing out the stomach, no doubt, saved some cases, but, when a lethal amount has been carried into the circulation, the problem is, to neutralize the poison in the system and repair the damage done by it early enough to save the patients' life.

It had been observed in many cases that anuria was a prominent symptom, and the conclusion was drawn by many that the fatal lesions were situated chiefly in the kidneys; in some quarters, this belief still is maintained. However, later and more extensive observations have shown that the most serious lesions are in the gastrointestinal tract. Ulcers of the stomach and bowels, especially located near the ileocecal valve, are universally found on postmortem examination. If the patient lives long enough, the anuria clears up, but, he still may die from hemorrhage from these intestinal ulcers. A patient in the Evanston hospital, reported upon by Doctor Carter, passed 48 ounces of urine the day preceding his death from intestinal hemorrhage. She had had complete anuria for 69 hours. Even when the patient escapes hemorrhage, death still may result from destruction of the red blood corpuscles.

Dr. Carter's Antidote

Among those who interested themselves in searching for a more satisfactory antidote, was Dr. Thomas A. Carter then connected with one of the medical schools of Chicago. After months of study, observation, and animal experimentation, Doctor Carter came to the conclusion that he had found an antidote possessing a certain amount of value, how much, only time and experience could show. As opportunities arose he used it in a number of cases and was so encouraged by the results that, in March 1914, he read a paper before the Chicago Medical Society, giving the formula of his treatment and reporting the cases in which it had been used. At that time, he had records of 16 cases with 14 recoveries. He invited the cooperation of the society asking the members to try his method and report their results

Ever since Doctor Carter first announced his antidote to bichloride of mercury poi-

soning, he has been met, in certain, quarters, with skepticism. No fault can be found with this, provided it is inspired by a spirit of fair play. So many fake cures for various diseases have been sprung on the medical profession that it is not surprising if conservative men are a little cautious about acknowledging the merits of a new plan of treatment. But, every fairminded man is in honor bound not to demn without investigation, and, when evidence is offered, he should be willing to weigh it with an unprejudiced mind. But, Doctor Carter's experience in trying to get the medical profession to consider and test his antidote, goes to show that there is much truth in the statement often made that there is no jealousy so bitter as professional jealousy between doctors. There is, unfortunately, a sort of self-constituted aristocracy in the profession who cannot endure the thought that any one outside of their sacred circle should accomplish anything; if he does, he must be tabooed and taught his place.

No fairminded man could take exception to Doctor Carter's course from the beginning. Practically, in word and action he said: "I believe I have found something of value. It is no secret. Here is the formula. Try it when an opportunity arises. Time and experience will soon show whether I am right or not." Nothing could have been more open and aboveboard.

But, in spite of his attitude of perfect frankness, he has been assailed with the usual weapons of professional jealousy. He was accused of being unethical. It will be time enough to meet this charge when his enemies can produce a single instance of unethical or dishonorable conduct.

He was accused of using a secret remedy, this despite the fact that he gave the formula to the Chicago Medical Society in his first paper on the subject. Earlier than that, an announcement would have been premature, for, the formula was still in the experimental stage in his own mind and liable to be changed.

He was accused of trying to make money out of it—a very grave charge, indeed! but, rather amusing in the light of the fact that 80 percent of his cases to the present time have been charity cases It is a well known fact in the medical profession that attempting to save would-be suicides is not brilliantly successful from the financial standpoint.

He was accused of advertising himself in the newspapers. But, no doctor can be held responsible for what the newspapers say about him. Cases of attempted suicide must, according to law, be reported to the police. Police news is freely open to the newspapers and they can not be prevented from publishing anything they see fit about either the doctor, the patient, or the treatment. Often, they publish a great deal of rubbish, but, that is their affair. Still, it may be said to their credit that they are quick to turn down any doctor who tries to use their columns for his own self-aggrandizement.

The Luikart Case

Last October, a case occurred that attracted wide attention and whose progress was followed by newspaper readers all over the country with sympathetic attention, on account of the peculiar conditions and the youth and innocence of the victims. In a suburb of Detroit, two little girls, Shirley and Edna Luikart, aged 7 and 5 years respectively, lived with their parents. The mother had long nursed a desire to go upon the stage and, brooding over her disappointment finally unbalanced her mind. She made up her mind that her two little girls would be better off dead. She secretly fed them bichloride of mercury for 12 days or thereabouts when their increasing illness led to the discovery of the facts. The children were treated in a Detroit hospital for 12 days, but their condition was so serious that no hope of recovery was entertained.

The *Chicago Tribune* has always taken a deep interest in Doctor Carter's antidote. So, when the Detroit physicians concluded that they had done all they could, the *Tribune* brought the children to Chicago, placed them in the Columbus Hospital, and told Doctor Carter to "go to it."

The children had been taking the poison for 12 days, they had been in the Detroit hospital 12 days, making 24 days in all. If any treatment could help after such a lapse of time, its efficacy could not be doubted. The charges made by some Chicago medical skeptics, that it was not known for certain that the children had taken bichloride and that they were virtually well when brought here, are so absurd

in view of the facts that they need not be seriously considered. When the two little girls entered Columbus Hospital, they were very sick children presenting the characteristic symptoms of bichloride poisoning, especially the nervous symptoms. Shirley's hemogloblin was only 10 percent of the normal. She was at once given a blood transfusion from a healthy adult. The antidote, consisting of sodium phosphite, 6 grains, and sodium acetate, 4 grains, was given every hour to both children. Edna responded promptly to the treatment and soon was out of danger; but, Shirley's condition continued to waver in the balance for days. After the 7th or 8th day, though, she began to show signs of improvement. Still, knowing the danger of hemorrhage from the intestinal ulcers which are present in severe cases, Doctor Carter was careful to avoid undue optimism in his daily bulletins. Finally, about the 12th day, she seemed to be out of danger and both children were able to leave the hospital on the 16th day, quite well although weak.

The difficulties of managing the case and of guiding it to a successful conclusion were greatly increased by all sorts of outside interferences. People with sure cures, people with simply morbid curiosity, people who knew that Christian Science could save the children, newspaper reporters who showed no consideration for the welfare of the children if only they could get a "story" out of it—all contributed to make Doctor Carter's life a burden to him. One newspaper insisted on getting a flashlight photograph of the little patients after ten o'clock one night, at a time when Shirley's condition was such that a little excitement might have caused a fatal hemorrhage. On Doctor Carter's refusal to give permission, the newspaper people threatened to ruin his reputation. So far, the threat has not developed anything more serious than attempts to belittle his professional standing and hints that the children were cured by Christian Science rather than by the doctor's treatment.

The children were brought to Chicago under circumstances of such haste and confusion that they had no clothing except what they had on, each having only a suit of underwear lent by a kindly neighbor in Detroit. So, one day, Mrs. Carter went shopping and bought them some necessary clothing. Of course, the newspapers made a "story" of this and, equally of course, the watchdogs of the medical profession saw in this kindly act an effort to advertise Doctor Carter and his antidote.

Dr. Carter's Personal Interest

It is true that both Doctor and Mrs. Carter took a deep interest in the children; yet, why should they not do so? I remember that they have two little girls of their own, of about the same age as the Luikart children, and that several years ago the doctor and I fought the battle of life and death for days, side by side over the crib of their eldest; and finally won. So, to me it seems the most natural thing in the world that these parents should feel an unusual interest in two waifs that reminded them strongly of their own little children, recalling their days and nights of anxiety when the clouds hung over their own home.

It is a humiliating fact that the medical profession should contain so many men who will stoop to exhibitions of jealousy when a colleague attempts to secure attention to some new method of procedure or some new method of treating disease. It is all the worse because it is done under a hypocritical pretense of zeal for the ethics of the profession. Yet it need hardly be said that fair play ought to be one of the chief principles in any system of ethics. One prominent journal published a paper criticizing the antidote while Doctor Carter was in service in France. Then, as the criticism quite naturally went unanswered, it was suggested that it was unanswerable.

However, every cloud has a silver lining. Some of the prominent medical men of Chicago have given Doctor Carter credit, approval, and encouragement. As a rule, the big men have been fair. Dr. Hugh T. Patrick, the late venerable Professor Haynes, the late Dr. John B. Murphy, Doctor Ochsner—all have shown themselves eminently fairminded. Professor Fantus, of the University of Illinois, undertook extensive experimentations with the various antidotes to bichloride of mercury, and, in giving his results in two papers published in the *Journal of Laboratory and Clinical Medicine*, he gives first place in both to Doctor Carter's antidote consisting of sodium phosphite and sodium acetate.

The Function of the Thyroid Gland

By E. H. BOWLING, M. D., Durham, North Carolina

EDITORIAL COMMENT.—In neglecting to consider the important influence that is exercised by the thyroid gland, in many pathological conditions, both evident and obscure, we, often, lose opportunities for securing prompt results. Doctor Bowling's study is sure to impress the reader with many things that are well worth fixing in mind.

WHEN the thoughtful physician views the present wave of therapeutic nihilism that for years has threatened to engulf the minds of the members of the healing art, he is forced to stop and take his bearings and to try to discover whither we are drifting. It is certain that the world will not be satisfied much longer with the empiric methods that have obtained in the past. The more intelligent of our patients will not be drugged with the nauseous concoctions that have been inflicted upon our forebears, unless a definite result is vouchsafed. It is probable that medicine never can become an exact science; still, we can, at least, make a more thorough study of the mechanism of this wonderful body of ours which can truly be said to be the superlative craftmanship of the handiwork of God.

Probably, it is natural for us to congratulate ourselves, when taking an inventory of the vast amount of knowledge that we possess at the present time as compared with the methods of producing salivation, purgation, and venesection of patients, by the members of our guild, say, one hundred years ago; still, if we eliminate the modern serums and antitoxins, the comparison in our favor is not so brilliantly favorable as one might desire. In the future, medicine will develop along the line of the serums and antitoxins and the understanding of how to stimulate or inhibit the action of the ductless glands. The object of this paper is, to stimulate study concerning the influence of the thyroid gland upon the economy.

Physiologic Action of the Thyroid Gland

The thyroid gland is known to exert a special influence upon the nervous and muscular systems, the skin and the epithelial structures, the sexual functions, and the osseous system and, as I believe, the gastric secretions and general metabolism. The effect of this gland upon the mental wellbeing of the patient is plainly evidenced in cretinism and myxedema.

It can safely be asserted that the thyroid gland is the most wonderful organ of the body. Through its internal secretion, it influences the growth of the child and the psychic and mental activity of the adult, it regulates the growth of bone, the formation and distribution of adipose tissue, and the nutrition of skin, teeth, and nails. Furthermore, it influences the rate of the heart-beat and the peripheral circulation, thus dominating more than any other agency the blood pressure; in conjunction with the pituitary gland, it regulates the nitrogenous metabolism of the body and, through its hormones, very likely, (indeed, probably), it controls assimilation and the natural resistance to disease. The opsonic index can be measured by the action of this gland.

Pathologic Conditions, and the Diseased Thyroid Gland

The thyroid gland is profoundly affected by the prolonged influence upon it of toxins. There are natural waters, especially springs, in Switzerland and Wisconsin, and those habitually drinking of them, be it man or beast, have an enlarged thyroid gland; while these same waters when boiled are entirely innocuous; thus showing plainly that there is in these waters some substance that irritates this gland and causes its enlargement. Is it then unreasonable to believe that the toxins of any chronic disease circulating in the blood would exercise the same deleterious effect upon this gland? Taking this view, is not it easier for us to account for the mental nervous symptoms encountered in most chronic diseases? Would not this account, in a measure, for the insanity of pellagra, for instance?

Several years ago, I called attention to the fact that, in all cases of advanced pellagra, there is a total absence of hydro-

*Read before the Sixth North Carolina District Medical Society.

chloric acid in the stomach; the truth of this assertion subsequently being proved by the observations of Siler and Garrison. In a vast number of instances, I have observed the acid-laden breath of the parturient woman; and, who of us has not been importuned to relieve the gastric hyperacidity of the pregnant woman!

So, then, reasoning by analogy, when, in the case of the pellagrin, with his body saturated with the poisons of the disease and suffering from hypothyroidism, we find no free hydrochloric acid, and in the case of the pregnant woman, in whom we know the thyroid gland to be whipping up the body to its fullest activity, there is hyperacidity, does not it seem reasonable to assume that the thyroid gland influences, if, indeed it is not the prime and sole cause of the secretion of hydrochloric acid into the stomach?

Then, if it really is the cause, or regulator, of the secretion of hydrochloric acid, why not of pepsin and the other digestive ferments? We know that the thyroid gland governs the formation and disposition of facts. But, how else could it do this without primarily influencing the digestion?

The parathyroid bodies influence the calcium-metabolism of the body, and, as tuberculosis is, primarily, an expression of calcium starvation, I make bold to predict that future clinicians will cure tuberculosis by treating it with methods now only suspected. Cancer, which still remains such an enigma, will eventually be conquered by our understanding and scientific treatment of pathologic changes in the internal secretions.

In all cases of exophthalmic goiter, the victims suffer from diarrhea, the result of subacidity in the alimentary canal; which is only another proof that the thyroid gland influences the formation of acid in the stomach.

Practical Application

It is not my purpose to go into any fine-drawn theory; still, as I am writing a practical paper for practical men, I must call attention to some of the things that we overlook in our everyday work; not, because we do not know, but, because we do not stop to look and think.

How many of us, let me ask, have been consulted, especially by our female patients, for chloasmic pigmentation of the skin, and we have disposed of them on "liverspots," possibly prescribed a dose of calomel and an inunction of ammoniated mercury, and let it go at that?

We do not stop to reflect that nearly all of these pigmentations are traceable to a faulty action of the thyroid gland. Recently, I was consulted by a man who, for several years, had been subject to periodic passive capillary congestion of the hands, and he was unduly alarmed lest it be pellagra. I tried various remedies, but, without effect, and, the more I failed, the more intense grew his apprehension. Then, at last, I thought of the thyroid gland as the possible exciting cause and instituted treatment accordingly. This resulted in lasting benefit to the patient and a very pronounced relief to myself.

Most of the cases of hysteria, both in men and women (let me say that I find that men can, and do, have hysteria, not in the same form, as the women, but, hysteria just the same) can, in nearly all instances, be traced to the thyroid gland; and, with the proper treatement of this organ, the results obtained are surprising and gratifying. What we term chronic malaria and pernicious anemia would be much more amenable to treatment if we were to make a more thorough study of the action of the thyroid gland and if we directed our treatment more to the proper functioning of that organ.

As stated before, it is my firm belief that our descendents will conquer tuberculosis and cancer by a more thorough understanding and a more comprehensive treatment of the thyroid gland, improve the digestion and assimilating functions, through this organ. Then, what now are such enigmas to us will be such no longer.

Probable Results of More Knowledge

The future treatment of obesity and its opposite—excessive leanness will be directed solely to the proper functioning of the thyroid gland.

Time will not permit me to go into the inviting fields of the mental development of backward children, of the spurring-on to feverish activity of the dull and sluggish adult, how it will be possible for the future physician to do vastly more than we can now accomplish in smoothing out the road of many cases of marital unhappiness by stimulating the thyroid gland of

the cold and unreceptive mate and inhibiting the action of the same gland in the more amorous of the twain concerned.

With a subject so pregnant for infinite beneficence as well as evil, it vitally concerns us physicians to be alert and to know how to meet a problem of such manifold potentialities.

How shall we treat these cases when once we have recognized the condition? For goiter and hyperthyroidism, we can confidently rely upon the surgeon. However, all these patients first come to the family-physician, and all these cases are not surgical when once they have been recognized. There is a vast field for the internist, and we must be up and doing, must not unctuously satisfy ourselves with the at there is not much known in therapeutics that will influence the action of the thyroid gland.

Remedies at Our Command

It is true that, as yet, our knowledge is rudimentary; still, we are not altogether helpless. We have remedies for the pathologically altered thyroid gland, the most-widely used at present being iodine and its various salts; these, however, together with thyroid extract, virtually complete our armamentarium as now recognized. As for the efficiency of these two drugs, there can be no question; yet, if we are to depend upon these alone, the record of our failures will be appalling. They have their place. Especially is the thyroid extract beneficial in *hypo*thyroidism, cretinism, and myxedema; however, it is contradicted in *hyper*thyroidism, hysteria and in other nervous conditions.

My experience has led me to believe that, in the chloride-group we have much more potent remedies than in the iodide-group. Sodium chloride no doubt is nature's first and greatest thyroid-stimulant. Ammonium chloride, long continued, is the only remedy that I have ever found that will cure goiter.

If the treatment was instituted before the formation of pus or if there were not too great hypoplastic changes in the gland, then chlorate of potassium, given in 2 to 5-grain doses, either alone or in combination with lithia and some digestant, has done more in my hands to relieve the enlarged gland of long existence in infections —notably pellegra—than has any remedy that I have ever used. Chlorine-water, given in teaspoonful doses every two to four hours, will have a most salutary effect upon a diseased thyroid gland. I have seen this remedy, unaided and alone, cure case after case of pellagra, and I am not certain, even now, that it is not the best single remedy that we have for that complaint. I have seen the same remedy exert a most beneficent effect upon pulmonary tuberculosis, and I believe that I have seen it cure tuberculosis in the incipient stage; however, recognizing my very limited ability to diagnose tuberculosis in its early stages, I have often assumed a mistaken diagnosis in these cases of suspected tuberculosis when the subjects made such ontoward recoveries.

Tobacco, with the vast catalog of sins charged against it, evidently is a thyroid-stimulant when used in moderation.

Phytolacca decandra, or ordinary poke-root, is one of the best vegetable remedies that we have for the diseased thyroid gland. Echinacea is another remedy that should not be overlooked, and I believe that the future internist will be much more liberal in his use of this drug than are we of the present.

The use of hydrochloric and of nitro-hydrochloric acid in these conditions of the ill-functioning thyroid gland has been sadly overlooked by us. These two acids, especially where there is hypoacidity, will give us wonderful results. The tincture of ferric chloride, in my opinion, does its best work as a hematinic, because of the excess of hydrochloric acid contained in it.

What Others are Doing

MORPHINE AND HYOSCINE IN ANESTHESIA

It is a peculiar fact that the advantages, to be derived from the employment of morphine and hyoscine in anesthesia, apparently are recognized far more clearly in England than they are here. In the course of the last few years, British medical journals have contained several interesting and instructive articles on the subject, and it has formed the topic of special discussion before the British Medical Association.

In the *Practitioner* for October last, Dr. G. A. H. Barton points out that there is a general, almost unanimous, opinion among anesthetists as to the value of administering morphine, hyoscine, atropine, and so forth, as a preliminary to inhalation anesthesia, while among surgeons there still exists some divergence of view. This, he believes, is partly due to prejudice. "A few unfortunate experiences early in their use led to bad impressions and raised the cry of 'scopolamine belly,' 'morphine rigidity' and so forth: the method is decried and abandoned. Again, those who have not studied the matter closely do not, perhaps, clearly appreciate the object of administration, the indications and contra-indications, and the limitations of the method."

The main object of giving preliminary narcotics is, in Doctor Barton's view, the patient's safety and comfort. In some operations, they are of assistance to the surgeon during the operation: in a large majority, they do not affect the operative procedure at all; while in a few operations there occur cases in which the surgeon may have to look for embarrassment. Generally speaking, it is in abdominal operations that trouble may occur and no anesthetist can guarantee a perfectly quiet anesthesia and flaccid abdomen when narcotics are employed preliminary to open ether. However, ether is far safer after a preliminary narcotic-injection than chloroform because the latter will depress the respiration dangerously, while failing to overcome muscular rigidity.

By employing the ether by the open method after giving narcotics, the patient is perfectly safe, especially since only a small amount of the anesthetic is necessary. In consequence, there is a distinct freedom from the unpleasant after-vomiting and from the risks of acidosis and ether bronchitis.

There are other advantages attaching to the habit of administering narcotics prior to inhalation anesthesia. The patient is calm and placid, often even drowsy, and the operation has lost its terrors for him. His mucous membranes are dry and the free secretion of mucus and saliva commonly associated with ether inhalations is absent. If the operation is one usually followed by pain, there is less postoperative discomfort. Surgical shock is hardly ever seen. The amount of ether used is reduced materially.

There are some individuals, however, who react badly to morphine. It may cause excitement instead of drowsiness; it may set up vomiting and may be followed by headache and constipation. If such idiosyncracy is known beforehand, the administration of morphine will naturally be avoided.

While Doctor Barton has used morphine and hyoscine with much satisfaction, he employs more commonly morphine and atropine, for the simple reason that these drugs are always on hand and also because there is some slight prejudice against hyoscine in the minds of some physicians. However, these objections hardly seem justified since it is easy enough to keep morphine and hyoscine on hand and since the combination has been shown to be virtually without danger if properly employed.

Morphine is the principal factor in causing the drowsiness and placidity of the patient. While atropine has little or no narcotic effect and may occasionally act as

an excitant; it has a powerful drying action on the mucous membrane. However, the narcotic action of hyoscine is marked and its drying effect is almost as decided as that of atropine. Consequently, it is preferable to atropine.

Doctor Barton declares that the effects of scopolamine (hyoscine) develop more quickly than those of morphine and that they are not so lasting. This is not in accordance with the experience of the Reviewer since he has found that hyoscine has a very decided "hang-over" action which often persists even beyond the first twenty-four hour period and to a time when every morphine effect has certainly disappeared.

The outstanding action of the narcotic, is, to render anesthesia less unpleasant to the patient, to diminish the amount of excitement and to prolong anesthesia, owing to the diminished respiratory efforts under their influence. During the anesthesia, the effect of morphine on the respiratory center must always be borne in mind. It is a depressant reducing the frequency and depth of respiration. Ether is a respiratory stimulant, and the result of the combination is, to produce a good regular type of breathing, as a rule a little quicker and deeper than natural, but, not the type associated with ether alone. Chloroform, except in the early stages, is a respiratory depressant, and, so, should never be deliberately preceded by morphine. If circumstances arise that render the administration of chloroform necessary, subsequent to morphine, the greatest care should be observed, for, the patient's breathing will become shallow and his color dusky.

After the preliminary administration of narcotics, Doctor Barton holds that it is not only unnecessary but a mistake to produce the third-degree anesthesia, or surgical anesthesia, since the patient suffers no pain and the operator is not embarrassed by reflex movement under less deep anesthesia. A fully satisfactory anesthesia can be attained even while a brisk corneal reflex is present.

As to the mydriatic effect of atropine, the large pupil, before anesthesia, does not persist but is always diminished by morphine. Indeed, the degree of contraction is an index of the morphine effect on the patient, and, if it is pronounced, the patient will require very little anesthetic; if it is not present, he will probably require a good amount. In old people, the contraction is sometimes very decided, the pupil being quite minute and not reacting to light. In such cases, the author generally considers that the dose has perhaps been a little more than advisable for the individual, and should order a smaller one on another occasion. The contracted morphine pupil persists throughout the anesthesia and does not follow the usual stages. A moderately contracted pupil, reacting, sluggishly to light before the anesthetic and not at all during its administration, is the best and the most common in a combined morphine and ether anesthesia.

As already mentioned, the corneal reflex may persist, and Doctor Barton never aims to abolish it. Reflex movements of the limbs, and other reflexes may be present with perfect unconsciousness and do not interfere with the operation unless it be a laparotomy. One great advantage of the preliminary narcotics is, that they diminish the cough reflex which frequently is very active during ether and chloroform narcosis.

One of the salutary effects of preliminary narcotics is, to prolong the period of recovery from anesthesia, causing the patient to doze comfortably for some hours and lessening the pain and discomfort immediately following operation. There frequently is no vomiting or nausea.

A preliminary injection of narcotics is definitely indicated in many cases. In operations on the upper air passages, in which little bleeding is anticipated and a light narcosis is sufficient, it is useful in preventing coughing, straining, and swallowing movements; such operations are, submucous resections and various endoscopic procedures. Owing to its power of diminishing the secretions, atropine is advisable in all operations on these parts as well as in all operations on children for which ether is to be given. In endotracheal, rectal, and intravenous ether administrations, in prolonged gas-and-oxygen cases, and endothecal analgesia, morphine, combined with hyoscine or atropine, is an almost essential preliminary. In operations likely to involve shock, it is invaluable, followed by ether, and the same may be said of bad septic cases.

The contraindications to preanesthetic narcosis must be considered from two

points of view; namely, the patient, and the nature of the operation. Atropine can be given with advantage virtually to all patients of whatever age, unless it is ascertained that the individual is one of those rare cases that exhibit symptoms of poisoning under medical doses. In an experience extending over many years, Doctor Barton has never met one of these cases; the utmost that he has witnessed, has been a great deal of excitement, not amounting to delirium, flushing of the face, with tachycardia and extreme dryness of the throat; such cases have formed an insignificant fraction of thousands of administrations. Morphine should not be given to the young, certainly not under the "teens". After that, in suitable doses, it may be given at any age, except in cases of Bright's disease and in all cases in which the blood is insufficiently oxygenated, whether arising from heart or lung disease, from pressure on the diaphragm, from below by fluid or tumors in the abdomen or from large pleural effusions.

The nature of the operation does not affect the question of atropine. As regards morphine, there are two classes of operation in which the advisability of its administration is open to question: namely, laparotomies and certain operations on the nose and throat. Its administration previous to laparotomy has to some extent been dealt with. The author's opinion is that, taking the average of a large series of cases, as good relaxation can be obtained with morphine and open ether as with chloroform. Nowadays, most surgeons prefer this method, still, there are others who prefer to operate under chloroform. Therefore, it is well, before ordering morphine, to ascertain the views of the surgeon and, if chloroform is demanded, morphine is contraindicated.

The administration of morphine before operations on the nose and throat requires a good deal of consideration, and not only the operation itself, but, the method of the individual surgeon is a factor in coming to a decision. The first point one has to consider is, what are the prospects of the pharynx becoming flooded with blood during the operation? If this is a possibility, then morphine had better be avoided owing to its inhibiting influence on the cough reflex. In coming to a decision, much will depend on the methods of the surgeon (in some hands, an operation is almost bloodless, in others, very gory), on the position of the head during operation, on the duration of the operation (if short, morphine is not barred, for, the patient's head can quickly be put in such position that the blood gravitates away from the danger zone) and, on whether bleeding is likely to continue after the operation; finally, on the character of the nursing supplied. Another point is, the degree of quietude required by the surgeon. It is usual, nowadays, to enucleate tonsils under a very profound anesthesia, the faucial reflex being abolished. Although morphine certainly tends to lessen reflex excitement, it is doubtful if any anesthetist would guarantee, in a lusty young adult, to maintain the required degree of narcosis with morphine and open ether. Such cases, therefore, calling for chloroform, are better without morphine.

The ordinary dosage for an adult is 1/4 grain of morphine, and Doctor Barton believes that 1/6 grain is too much for chloroform and not enough for ether. It may be necessary to increase this dose; while, in the old and fragile or in puny adolescents, smaller doses to as little as 1/8 grain may be desirable.

Hyoscine is always ordered in 1-100-grain doses. It is not employed in young adolescents or in the aged so that the question of age does not arise.

Atropine can be given in 1-100-grain doses at almost any age, certainly from two years upward. In the case of children, the usual posological rule is not applicable to atropine because it requires fairly large doses to lessen the free secretion of mucus. For children under two years of age, Doctor Barton usually gives 1-200 before ether and none at all before chloroform. In his experience, it is not well to give this preliminary dose by mouth instead of by hypodermic injection because the results are not so good.

The best time for the administration of preliminary narcotics is, one hour before that fixed for operation. That allows the optimal period for the narcotics to develop their action and produces the most favorable cooperation of narcotics and anesthetics.

FACIAL WARTS

A writer in the *British Medical Journal* states that facial warts can be easily cured

by rubbing in castoroil, but he advises that it should be "camouflaged." Dr. Thomas Dutton, M. D., *Medical Times* (Lond.), Oct., 1919, has found papain dissolved in hydrochloric acid a most efficient remedy for facial and all other warts. Castoroil is certainly a much less expensive remedy and should be given a trial in these obstinate growths which are very difficult to cure.

INFLAMMATION AND SUPPURATION: MAGNESIUM SULPHATE

James Alston (*Med. Press.*, 1919, 107, 258; Apr. 2), uses a solution of magnesium sulphate (2.5 to 5 percent), rendered sterile by boiling. The application is made by means of lint, gauze, or wool, and must be continuous; if necessary, baths may be used. Abscess cavities are first syringed with the solution, and then packed with gauze soaked in the solution. The author has had unvarying success with his treatment in carbuncles and poisoned wounds, phimosis, erysipelas, phebitis, and acute inflammation of ulcers and varicose veins, etc. He has also had satisfactory results in surface tuberculous lesions. In summing up, the author states that this method of treating inflammatory and suppurating lesions is simple in its application, certain and effective in its action, and that in many cases the necessity for operative interference is obviated. (*The Prescriber.*)

MANAGEMENT OF WAR HYSTERIA

Some of the interesting and, at the same time, extremely difficult phenomena during the war were, the nervous and mental disturbances suffered by the soldiers. In a communication read before the Neurological Section of the American Medical Association, and published in the *Military Surgeon* for November, Dr. Tom A. Williams, of Washington, D. C., declares that nearly ten per cent of "evacuations" were due to hysteria.

Most cases, he asserts, can be restored immediately if skillfully met, differentiation to be made from cerebral commotion and from chronic emotivity. A wound does not prevent hysteria; indeed, it affords a powerful suggestion toward military incapacity besides being a painful focus inhibiting movement and inducing contracture. Cardiac fatigue often suggests the long-continued incapacity which may manifest itself as an effort-syndrome.

Successful therapy must count upon the psychological mechanism of each patient. But, the physician must not only understand, but must exercise a dynamic volition that will compel the patient to use the effort demanded. A special clinic facilitates the doctor's task, as it brings to bear upon the patients a massive counter-suggestion. Relapses are to be prevented only when the army in general comprehends the principles of suggestion, collective and individual.

The inert man must be differently treated to the determined man; the former is easier to cure but more difficult to keep well. In neither case, however, is it wise to let coercion predominate. To engender an active motive and desire to return to duty, must be the doctor's aim. In a majority of cases, collective suggestion is an important feature of treatment, but, in a more complex case, individual analysis is essential.

The methods most generally and successfully used have been:

1. Straight suggestion in the early stages at the front.

2. Indirect suggestion and persuasion, often combined with *torpillage*[1] or other uncomfortable application, or by isolation.

3. Best of all, however, a metamorphosis of the patient's mental attitude by re-educative suggestion.

Both principles and methods are the same as those used by the author before the war with civilian patients, as described in the *Journal of the American Medical Association*, in 1912, the *Illinois Medical Journal*, in 1914, and elsewhere.

[1] *Torpille* means, torpedo; *torpillage*, therefore, would mean literally torpedoing. We have not been able to discover the term in any of the books in our library on war-injuries or war-diseases. However, it evidently means, treatment by some sudden thrust, or shock, or other manipulation, through which the hysteria is to be counteracted, as it were.—Ed.

Let's Talk it Over

Medical Giants in America

EVER since Lafayette joined Washington's Army, to aid him in the struggle for liberty, and since Benjamin Franklin was received in Paris as a representative of the young republic across the Atlantic, there has existed a close friendship between the French and the American nations. In the days of the great French clinicians, especially in the fifties and the sixties of the past century, many recent graduates went abroad from the United States to receive postgraduate instruction in the ancient hospitals of Paris. Later, to be sure, the lure of inducements made by German universities was effective and it became the fashion to put in a year or two in Berlin or Vienna, in Munich, Heidelberg, and Leipzig. Still, there always were a good many who acutely felt the relationship of republican ideas and preferred to seek opportunities for postgraduate study at French universities.

Among the American physicians that, through personal contact, are well acquainted with the French medical school, stands out at the present day, especially, Dr. Beverley Robinson, of New York, who spent several years in Paris, in the sixties of the past century, after the close of the Civil War, and who later practiced and taught in Philadelphia and New York. Recently, probably through our participation in the war and the resulting closer rapprochement between France and the United States, Doctor Robinson has become reminiscent and has given to reading physicians much interesting information on his experiences that time.

In *The Boston Medical and Surgical Journal* for August 14, he tells of a medical student's life in Paris a long while ago. The student familiar with French medical literature finds in these reminiscences names that he has long prized and he will be inclined to envy Doctor Robinson for having had the opportunity of meeting men such as Trousseau, whose clinical lectures stand out among textbooks of the practice of medicine, or Nélaton, the accomplished surgeon of the Charity Hospital; Bouchard, the eminent scientist; Dieulafoy, the accomplished clinician and teacher; and many others. Doctor Robinson's description of his days in Paris is attractive because of its simplicity and spontaneity. It makes one actually see those great French physicians and surgeons that contributed so much to the sum total of medical knowledge.

However, we are attracted even more by a more recent contribution of Doctor Robinson's to *The Medical Record* (Sept. 6), in which he describes medical life of Philadelphia and New York at the time that seems to us to be "ages agone." Is it really possible that there are people living who actually met and conversed with the Meigs, father and son; the elder Pepper, Gross, Da Costa, Alonzo Clark, William Parker? Truly, these are names to conjure with. Then there are, Loomis, the elder Janeway, Flint, father and son, Markoe, Sands, Peters, and their successors Buil and McBurney. To have known these and many others of the men concerning whom Doctor Robinson presents such an attractive *causerie* (too bad that there is no English word describing fully the meaning of this noun), was a liberal education in itself.

He relates of Dr. Alfred L. Loomis, whose assistant he was, that he was a forceful, clear speaker, mainly because he first read and informed himself fully as to his subject and then allowed the spirit and enthusiasm of his class to inspire his words. In his teaching, he was positive, refraining purposely from speaking of exceptions, since he held that students would learn these later, and the better way to

teach them was, to state facts boldly and without naming exceptions.

The elder Flint was the antithesis of this. He mentioned exceptions, feeling that that was the correct way of teaching. Doctor Flint had but moderate faith in the efficiacy of drugs; still, he was fond of especially two remedies, namely potassium iodide and Huxham's tincture of bark. Whenever a modifying agent was required, he gave the former. When a tonic was indicated, he gave cinchona, usually in association with tincture of nux vomica.

Dr. Austin Flint must have been a wonderful man to meet in consultation, especially for an unexperienced young physician who tried hard to do his best. Doctor Robinson relates how Austin Flint listened to the attending physician's account of the patient, after which he examined the latter. Afterward, he suggested what he would do in the way of treatment or change, although rarely as to the diagnosis. When asked his opinion about the patient, by the family or relatives, he waved them courteously aside, referred them to the family-physician, and left the house with a smile and a bow to all.

There are some side lights on the financial consideration in those days. Doctor Robinson had called in Dr. William H. Van Buren as counsel. After the consultation, when asked the amount of his fee, Doctor Van Buren answered, "Nothing." When Doctor Robinson insisted he said, "Well, if you will have it so, call it $25.00." In those days fees were one-half or less than what they are today. In the days of Meigs, father and son, the fees were far less still.

Dr. Charles Meigs never sent a bill. He considered it derogatory. He would accept a "honorarium," if sent to him. How, then, did those men live? For one thing, living then was cheaper. They lived laborious lives and gave themselves wholly to their profession and had few or no amusements, not even the theater, or billiards, or a game of cards. They were men of good, often, high social position before they became doctors and inherited some money from their parents. Besides, they entered the medical profession with a high ideal of its nobility and would do nothing to lower it. To ask or exact large fees, was, to make a trade of it and to lower it. They wished to do everything to promote the wellbeing and cure of their patients, and they did. With this intent in view, there was no "service" which seemed to them beneath their dignity or moral obligation. Hence, they became models to everybody.

Concerning Dr. Abraham Jacobi, who died so recently, full of years and honor, Doctor Robinson says that everyone has heard of Doctor Jacobi and, invariably, in terms of highest esteem. He always stood for what is highest and best. His books, his articles, his remarks before medical societies ever were filled with wisdom in regard to medicine. He was a very valuable, patriotic citizen; indeed, a splendid example to all. During the late world-war, although of German birth and parentage, he was ever a loyal American. To his adopted country, he affirmed that he owed much, and he repaid it by whole-souled devotion.

Then, there are the surgeons William T. Bull and Doctor McBurney, of whom several interesting stories are told; also, Francis Delafield, who was one of the notable pathologists of his time, and Dr. Edward J. Janeway, the brilliant clinician. Doctor Janeway, we read, had rare diagnostic skill. He had a fund of common sense; he never went off on a tangent; he was absolutely reliable. He was not really fond of anything other than medicine. That he loved and to it was most devoted. He rarely made a mistake.

Janeway did not believe much in the utility of drugs, except those that are simplest and best known. Of these, he would give small doses and, in taking care of Doctor Robinson on one occasion, he said, "I would take that myself; I don't think it will hurt you." Although Doctor Janeway reached the top of the ladder and was consulted far and wide, he never took advantage of his position to charge exorbitant fees. He always was moderate and just.

Then there were the early oculists, Dr. D. B. St. John Roosa and Dr. C. R. Agnew, the former of whom was president of the Postgraduate hospital, which he greatly helped to found and put on a firm foundation, by reason of his gifts, his influence, and his arduous work in its behalf, while the latter accomplished good work for the Manhattan Eye and Ear Hospital.

At the time while both these men were prominent in New York, publicly and before

the profession, the great fight took place between those that upheld the old code of ethics and those that favored the new code. The old-code men would not hold consultations with the Homeopaths; they regarded them as, in a way, being charlatans. The men that upheld the new-code doctrines felt that consultations should be held with Homeopaths when their services were requested and seemingly desirable.

Here, then, came the split, and the fight was long and bitter. The two Flints, father and son, were old-codists; Agnew, Roosa, and Barker were new-codists. Today, fortunately, this antagonism against worthy men of the homeopathic school no longer exists or, if so, only in a minor degree.

Then we read about T. Gaillard Thomas, Emmet, and Sims, the leading gynecologists; Fordyce Barker, A. A. Smith, the obstetricians; Lewis A. Sayre, one of the early orthopedic surgeons; William T. Lusk, the obstetric clinician, and James McLane, through whose instrumentality the Sloane Maternity Hospital was founded. There was Dr. George F. Shrady, the longtime editor of *The Medical Record*, and one of the most highly regarded medical literateurs of his day; who attended General Grant during his last painful illness and was all that a man could be to his illustrious patient.

To revert to the earlier ones of Robinson's reminiscences, we can not refrain from mentioning his reference to Dr. William L. Polk, whom, on one occasion, Doctor Robinson asked in what way he amused himself. Doctor Polk replied, "I do not. I have never found time and I do not know how." Then he added: "Robinson, I fought on the southern side in the war of the States, as a private soldier at one time, and I tell you, the life of a conscientious, successful general practitioner of medicine is more trying and arduous." On another occasion, when the two were in conversation, Doctor Polk, then already distinguished, repeated the forgoing remark. Doctor Robinson relates that he felt then, and later, the truth of that statement. Indeed, he tells us that he knows of no profession, other things being at all equal, in which the life of the conscientious, successful practitioner is so exacting and irregular. "Here it is, that the man is made that becomes like refined gold or the veriest dross. It is, in a way, a furnace-testing. But, in those days, loyalty and devotion to the family-physician[1] still repaid his personal self-sacrifice, and he was glad to give it. The pecuniary return to him was relatively meagre at times, and his outlay of strength and anxiety was very great; but, with it, he had the greatest of life's compensations —the consciousness of duty well done."

We hope that Doctor Robinson will favor us with more of his reminiscences, and that others that were as fortunate as he may do likewise. There is an inspiration and an incentive to do good work, as a true physician should, in these stories told so simply, without any frills or effort at complicated word-painting. Our immediate predecessors, the physicians of the last quarter of the nineteenth century, fought abreast with those of Europe, in establishing the new order of things and in making possible the great strides that the healing art, both in medicine and in surgery, has made. We owe much to them and it is timely that we should be told of them, so that we may appreciate their struggles and difficulties and, therefore, value their accomplishments. We all, today, are prone to be egotistical in our cocksure knowledge of the most modern results of investigation and research; yet, how many are there living that could be placed side by side with clinicians like Trousseau, the elder Flint, Loomis, and some of their contemporaries?

True, the French still have many shining lights. The English claim Osler, although him we only loaned to them, considering him, still, as an American physician. We are proud of our Shattucks, Cabots, Weir, Mitchells, and many others. All these received their inspiration from their immediate predecessors, the men of who Dr. Beverly Robinson is speaking so intimately.

ANOTHER THEORY OF THE CAUSATION OF SEX

There has been much speculation on the subject of the causation of sex. In all probability, most of us have had theories in our heads, some of which possibly have never been exploited.

Here goes one that, I believe, has not as yet been advanced, and which may be easily displaced or, perhaps, may stimulate thought in this direction.

When the ova or the spermatozoa are deposited in the uterus, they at once begin to

grow, each according to the life and temperament of the depositor and surroundings. Hence, the ova and the spermatozoa will vibrate, at different rates of velocity, according to the circumstances; then, when they come together, the one possessing the greatest velocity of vibration, determines the sex, as the fittest survivor.

Here is another thought; the younger the germ, the higher the vibratory rate. Hence, provided the ovum had remained for some time in the uterus before being pierced by a more recently arrived spermatozoon, the more we should expect a male offspring, and *vice versa*.

According to this theory, I should expect male children to predominate in times of war.

I do not accept Doctor Dawson's theory with respect to the ovaries, any more than I would make a distinction between any other pairs of organs in either sex.

H. W. Scott.

Regina, Sask., Canada.

WHAT I KNOW ABOUT AN AUTOMOBILE

Dear Editor:

There must be many Clinical-Medicine readers that know as little about the anatomy of an automobile as I do. I gather this hunch from a bunch of letters that I have received, as a result of my previous articles in C. M., on "What I Don't Know About an Automobile."

Your having declined my offer to write a series of articles on this subject, at 5 cents a word, I am forced to address you in this fashion, in order to let you know what I know about an automobile, now, after a brief, though eventful experience of six months. Also, to let my friends know that I have not been killed in an automobile smashup—as yet.

I confess that I still know as little about the appearance of the differential as I did some thirty years ago, when I first saw a horseless carriage. However, I do know what the bowels of a battery resemble, for, I paid six bucks to have an electrician open up this animal in plain sight and explain to me what he meant by such technical expressions as "dead cells", "buckled ribs" (or was it "buckled plates"?), "short circuit", "new separators", "recharge", and a lot more of such jargon. The part that I remember most vividly is the "recharge". This is where you approach the pay-wagon and hand the driver six smackers, without any change back, when you thought the entrance-fee was fifty cents. I have forgotten just how many volts I got for this amount, but, I know that my pocketbook was temporarily paralyzed and that my language at the time was shocking.

Then, too, I know now, what and where the generator is. This knowledge has also been acquired, on my part, at some expense. As I was told afterwards, I am supposed to watch a little dial, or indicator, on my instrument-board, while I am running, to see whether or not my battery is charging or discharging. This gives me a clew as to whether or not I am going to be charged for generator-repairs. Being busy watching the road, I failed to notice that everything was going out and nothing coming in so far as my battery was concerned. The charge was another five bones. It seems that the actual time consumed in soldering a broken wire in the generator was five minutes, the other $4.85 was for taking out this appendix and then putting it back again. I now watch both the charge and the discharge.

I know also, in a general way, where the tappet-rods are, the distributor and several other appendages, quite as necessary, I understand, to the proper functioning of an automobile-engine, as are the kidneys and liver in the human anatomy. Small sums, ranging from fifty cents to a dollar, have sufficed to quiet colicky noises in these directions, but, I fear I shall never be able to do any minor surgery on these parts, myself, nor even to give first aid.

My ability in this line is limited to changing and cleaning an occasional spark-plug. I am quite proud of this accomplishment, having learned, at the expense of several perfectly good porcelains in contiguous cavities, surgically speaking, how to manipulate a lefthanded monkeywrench.

I have uncovered an unusual tinsmith: one with unspoiled ideas as to what to charge or rather, what not to charge, for hammering out dents and green-stick fractures in my fenders. I shall keep his address a secret, lest his popularity become so great that his prices soon may become prohibitive. In that case, I should have to seek a new tinsmith, and that would be troublesome.

I still listen with wonder when my friends tell me about taking the carbureter

apart or demobilizing the vacuum-tank, and I look upon them with awe and admiration. When I am able to perform such delicate surgical operations, without having any loose parts left over, I shall feel that this preliminary training justifies me in attempting such major surgery as grinding a valve or changing a piston-ring. When this time comes, I fear that the automobile will, like the dodo, be extinct and that I shall have to attend a quizz-class on the anatomy of an airplane.

Outside of a head-on collision with a frisky Ford and a rear-end bump from an inebriated boob in a Sheridan Road 'bus, my driving has been a delight. I now boast of a slight speaking-acquaintance with several crossing-cops; with others, not so much.

I understand from eminent diagnosticians and specialists in automobile diseases, that the health of my Reo has been quite normal to date, the minor ailments that I have mentioned being only as the early and common afflictions of childhood days, which though, as we all know, unfortunately, are infectious.

As my mileage mounts higher, I experience new pleasure in listening to learned "Gasoline Alley" discussions about "quick pickups", "good compression", and "miles per gallon of gas". So long as my car continues to reel off forty kilometers every sixty minutes, and as smoothly as it does at this writing, I shall not let these symptoms worry me, nor shall I endeavor to delve too deeply into the hidden mysteries of loco-motor-taxi-dermy. In other words, and suffice it to say, I shall continue to sound the praises of the Reo, and of Major Unwin's excellent service.

S. DEWITT CLOUGH.

Chicago, Ill.

A GOOD OPENING FOR A PRESCRIBING PHYSICIAN

The Anderson Drug Company, of Stanhope, Iowa, desires to induce a competent physician to locate in that place. They make the condition that the physician shall write prescriptions and shall not dispense. That, however, can be arranged if the Anderson Drug Company is willing to put in a stock of medicines to which the physician settling there is accustomed and which he desires to prescribe. We append the letter received regarding the practice. It is as follows:

"Population of town about four hundred. Electric light and power, twenty-four hour service; and city water. Consolidated schools. Town has two large general stores, two restaurants, two lumber yards, two elevators, two banks, two garages, three blacksmith shops, one drugstore, one picture-show, one dentist, one veterinarian, one physician. Had two until a short time ago; the man that moved away went into special work, after staying here for ten years; also, one osteopath.

"Territory as follows: north, 13 miles; east, 8 miles; south, 20 miles; west, 8 miles —no waste land and worth from $300 to $450 an acre; the people are mostly Scandinavians and they have the money. Nearly all pay cash as soon as you leave the place.

"We have six rooms over the drug store that we will rent for $25.00, and they are well located.

"Now, if you want this, get busy quickly, as this will not be open long. The idea is, that we want a doctor that will prescribe and not dispense; and, in return, we will boost for, and help, the doctor in every way possible. We can assure you that we will treat you right, but, of course, we shall expect you to be fair with us.

"If you have the dispensing bug, do not answer; but if you care to prescribe and will appreciate a square deal, come at once and look this over as we have a real location here and not anything for you to buy."

ANDERSON DRUG COMPANY.

Stanhope, Iowa.

MOVING PICTURE SHOWS IN THE SERVICE OF THE SOCIAL HYGIENE CAMPAIGN

The Social Hygiene Films of America, Inc., who call themselves "producers of motion pictures with a purpose" ask us to publish the news item following below:

"The new motion picture, "Some Wild Oats," on the venereal-disease question, has been released. This picture was made under the auspices of the New York City Health Department, and with the aid of the U. S. Navy Recruiting Division. It is in seven reels, one reel contains propaganda, and the other six a powerful love story, showing the ravages of the disease, how it is contracted, and the solution for stamping it out of every locality.

"In one of the reels, Royal S. Copeland, Health Commissioner of New York City, is shown at work, and it also shows what his department is doing to eradicate this menace in New York City. All the authorities claim that "Some Wild Oats" is a clean production, as it is so constructed that it will not offend anyone, but will teach a remarkable lesson without preaching. This picture was made by the health officials who condemned

"Fit To Win," "The End of the Road," and "Open Your Eyes," which they considered immoral and the showing of which, in the State of New York, they prohibited.

"This picture will be shown in regular theaters throughout the country, wherever it receives the local support of the authorities; it is considered the best propaganda film ever made on public subjects, and should be shown in every municipality of the United States."

DISEASE

Flesh maladies. So many are the ills
The body has to bear. Diseases grave
Invade the life. The weak, the strong, the brave,
All have a share and pain each body fills.
Our happiness crowned with euphorian frills
Some time must crumble to the level grave;
When skill has failed and wisdom can not save
Man goes as his oppressor duly wills.

In face of this, let life be joyous spent,
Time but one moment hath unto us lent.
Keep active in the mart and forum now,
This duty plain each man should feel and know.
Live earnest, true, as on some purpose bent,
Then Death can not life's mission overthrow.

Jas. A. De Moss, M. D.

Thayer, Kansas.

OPIUM HARMFUL IN PNEUMONIA

I have practiced medicine over fifty years, am nearing the seventy-fifth mile post, am still attending a large country practice and object to being chloroformed, though I have not accumulated a fortune. My day of boasting is past, but, I think that I have earned the privilege of talking in plain language.

No greater an achievement can be attained than a working knowledge of the science of medicine. A successful working knowledge and rightly applied therapeutics are as sure of successful results as is sunrise.

About forty-five years ago, in consultation with two newly-fledged M. D.'s, I was called a damfool for predicting that the science of medicine would evolve a method for preventing typhoid fever. I have lived to see my prophecy verified. However, in this age, it seems that the once honorable noble friend of suffering humanity, the family doctor, is gone to the shades of ob'ivion and that the practice of medicine is manipulated and handled like any other commercial commodity.

It now seems probable that another severe test of the physicians' brains and nerve is approaching, through the recurrence of influenza and pneumonia with their usual complications, also, another unnecessarily-long mortality list of pneumonia. Yet, in my country practice, for almost thirty years, I have saved, not only saved but cured, about ninety-nine percent of my pneumonia patients; resolution is established by lysis, never by crisis, in from four to seven days and often earlier, and, during that time, I never have prescribed or dispensed a dose of opium or its derivatives in treating pneumonia patients.

Opium is one of our most valuable drugs but, when administered to its physiologic effect of relieving pain, in pneumonia, it locks every secretion of the body, slows the heart action, retards the circulation and promotes the coagulation of the blood. It is the duty of the physician to relieve suffering but this should be done without coming so near to committing a crime as by killing people with opium. True, this method might rid the world of some of the unfit, though, a better plan would be, while our paternal government is so deeply interested in the practice of medicine and in controlling private and domestic affairs, to urge speedy legislation on what seemed a previously contemplated plan, namely, to erect breeding pens for the propagation and rearing of a physically and mentally perfect race.

T. C. Estes.

Barren, Mo.

THE VALUE OF FASTING

The writer of this paper has been so favorably impressed with the value of this remedy, both in chronic dyspepsia and acute gastritis, that he hopes that this idea, supplemented by a few thoughts, citations from history, and records of practical experience, both personal and general, might be of value when recorded. Hence this paper.

As a Biblical scholar, I have been an enthusiastic follower of the greatest sanitarian the world has ever possessed, namely, Moses.

Now, in the book of Genesis, we find no mention of fasting, yet, being educated in all the learning of the Egyptians, Moses must have known the value of fasting in

certain cases of indisposition.

After the exodus of the children of Israel from their enforced bondage, they had to feed on manna. Being tired of this diet after a while, they murmured against Moses, saying: "Would that we had of the flesh-pots of Egypt." When they were about to mob Moses, a flock of quail made their appearance. Of these, they captured many and began to gormandize, with the result that many hundreds of them died.

When these people reached Mount Sinai in the wilderness, Moses instituted fast-days in their religious services, in order to establish the custom more firmly among them.

Some thirty-five years ago, my wife's brother-in-law, Dr. J. W. Moor, dined at Delmonico's, eating quail on toast as a part of his meal. The result of this was, a residence in the hospital for several weeks. Quails at times eat poisonous berries.

Three years ago, I was prostrated with acute indigestion, which I attributed to eating freely of Armour's boneless ham. Besides taking appropriate medication, I fasted from a Thursday morning until the following Monday noon. Three weeks ago, I was again afflicted with indigestion. This time, I could not determine the cause. However, seeing the good effects of giving the stomach a complete rest for a few days, I fasted from Friday until the following Monday. The result, as before, was, a complete recovery.

I believe that many cases of socalled liver complaint might be greatly benefited by fasting for a few days. Elimination would still go on and the body, being relieved of much toxic material, the individual would be greatly improved in health.

After all, autointoxication is not given credit for the foundation on which are built so many obscure conditions of disease. Doctor Hueppe says, on page 142 of his work on Bacteriology, "It is better for the majority of men to put themselves, through sensible ways of living, into such a condition that bacteria can get no lodgement in their systems. This, in few words, is the practical lesson of bacteriological discoveries, Koch to the contrary notwithstanding. It is a less comfortable doctrine but scientifically more nearly correct than the others."

Just here, as a sort of addendum to my article in the October issue of CLINICAL MEDICINE, I should like to add the following. In my reading I find the following recorded: "From statistics compiled in the United States, it is shown that the death-rate from cancer is annually 75,000

A Gall-Fly Tumor.

Tumor on Thistle Caused by Gall-Fly Sting.

persons and, in New York City alone, is 12.68 daily." This is attributed to excessive flesh eating. Over one year ago, I quoted from Dr. W. Matturi Williams the following: "I have met with some alarming revelations concerning the increasing prevalence of cancer, which if confirmed will force me to withdraw my previous conclusion. This horrible disease has increased in England with the increase of luxury in feeding—which in this country means more flesh food. * * * The evidence is not yet complete, but, as far as it goes, it points most ominously to a direct connection between cancer and excessive flesh feeding among people of sedentary habits. The most abundant victims appear to be women who eat much meat and take but little out-door exercise."

According to my belief, the cell is the anatomical and morphological unit of the body. I also believe that it has a kind of intelligence, of a low order, but, sufficient to enable it to care for itself individually, and collectively as tissue. There arrives a time of senility to the cell, followed eventually by death. The latter may be hastened by poison generated within the cell; its dead companions being the main source. In fact we are dying daily and being recreated anew. All dead material substances are poisonous to living cells and tissues, hence should be removed as fast as produced. I believe that cancer cells are proliferating cells that have taken on an abnormal growth stimulated by a poisonous excitation. Cells of such exuberant growth, having but a low order of vitality, soon die; their dead bodies infecting living cells.

The gall-fly's activities of life illustrate this contention. The accompanying drawing will illustrate how the sting and poisonous insertion by the ovapositer of the gall-fly can produce a cancerous growth in a plant.

I firmly believe that the uric-acid diathesis among the well-to-do of sedentary habits is largely caused by an excessive intake of flesh food. Such persons, I believe, would be largely benefited by a periodical fast.

A. J. CUZNER.

Gilmore, Fla.

—

[There can be no doubt entertained regarding the beneficial effect of fasting, for the relief of indisposition that is due to faulty metabolism, indigestion, and similar disturbances. This editorial writer invariably resorts to it when having to deal with the class of ailments mentioned, and always with satisfactory results that are especially striking in cases of what is popularly known as "biliousness". Fasting plus elimination will restore health in many functional digestive disorders.

We can not refrain from expressing our admiration of the beautiful drawings of our eighty years *young* correspondent, Doctor Cuzner.—ED.]

LETTERS FROM FRANCE.—XVI[1]

—

Work of the International Congress at Cannes

The conference, at Cannes, of British, American, French, Italian, and Japanese Red Cross Societies has been considering the reports of the subcommittees on tuberculosis and malaria.

The tuberculosis-subcommittee's report makes several recommendations, including the regular inspection of school-children, with a view to the early detection of the disease and the conducting of a popular propaganda by all suitable means.

The establishment of open-air schools for children already infected or suspected of having tuberculosis is recommended, and, also, the extension of the open-air system to all institutions naturally segregative, such as barracks, asylums, orphanages, and workhouses. The committee approved of the compulsory notification of the health-authorities concerning cases of tuberculosis.

The report of the malaria-subcommittee was presented today. In its deliberations, five of the world's greatest experts have taken part; Sir Ronald Ross; Doctor Laveran, (discoverer of the parasite of malaria) from the Pasteur Institute at Paris; Professors Marchiafava, of the University of Rome; Golgi, president of the Italian Board of Health; and Bastianelli, of Rome.

Doctor Laveran presided and congratulated the conference upon placing the fight against malaria side by side in importance with humanity's fight against tuberculosis and venereal disease. The committee recommends popular propaganda on a large

[1]It must be kept in mind that these letters were written several months ago.—Ed.

scale for instructing the public as to the needful steps for combating the disease.

This problem is one of peculiar interest to the British Empire, because of its far-flung colonies. In the case of Italy and other countries, it is a purely domestic problem. The suggested propaganda is to include the illustration of antimalarial measures by diagrammatic charts, as also by photographs and cinematographically, in addition to an intensive campaign against female mosquitos hibernating in their winter-lairs. Doctor Laveran referred to the great part that school-teachers can play in combating disease, and he gave, as an illustration, Corsica, where school-masters have had success with explaining the steps to be taken by children, who, in turn, are instructing their parents.

A special tribute was paid to the great work done by Sir Ronald Ross in helping humanity to discover the part played by the mosquito in carrying malarial infection. The committee recommends the immediate establishment of an international malaria-bureau, in conjunction with the suggested league of Red Cross societies.

Many women delegates were present when the report of the nursing-committee was presented to the conference by Miss Julia Stimson, chairman and director of the nursing-service of the A. E. F., and the British delegates on the committee, Miss Lloyd, matron of St. Thomas' Hospital, London, and Miss Gill, matron of the Royal Infirmary, Edinburgh. The committee suggests the organization of a special nursing-department in the central Red Cross bureau, to act as a clearing-house of ideas in all nursing-and health-work. The utmost importance was attached to the great army of volunteer-workers, such as the V. A. D.'s in England.

Doctor Welch, director of the Public Health School, Johns Hopkins University (Baltimore), referred to the fact that many new careers in public-health work will be offered to women and that they must, inevitably, perform the major part of the work in the world health-campaign now to be set in motion.

At the conclusion of the conference, a unanimous vote of thanks and appreciation was passed to all nurses, who have so nobly served their countries, and also to the armies of the allied nations. Sir Arthur Newsholme has been invited by the American government to confer at Washington with specialists on child-welfare work and to meet the leading American committees throughout the United States in connection with this work. He departed from Brest, on the Aquitania, on April 16.

The "Big Five" Red Cross societies devoted themselves to the consideration of the report of the child-welfare subcommittee, the British delegates of which are, Sir Arthur Newsholme, Dr. Truby King, and Professor Kenwood. The feature of the day's proceedings was, the large attendance of women delegates. If the recommendations of the subcommittee are carried out, the proposed international society of Red Cross organizations will turn its vast resources primarily to conducting a great child-life saving-campaign throughout the world. As Dr. Palmer Lucas, of California University, said: "The child not only is a national asset, but, also, an international one."

Several speakers urged the need of concentrating attention upon the child's prenatal period and the need of legislation in industrial centers that shall forbid mothers from working for three or four months before childbirth. Much greater attention, it was urged, should be given to the education of the child, at school, on health-matters.

Sir Arthur Newsholme declared that venereal disease was responsible for much ill-health in children and that the seeds of tuberculosis as a rule were planted in childhood; therefore, the purposes of the child-welfare campaign were closely related to these two subjects.

Dr. Truby King, of New Zealand, drew attention to the appalling state of the children's teeth, and referred to the subject as an almost universal condition. He maintained that, with due antenatal and postnatal care, the problem of the teeth could almost be solved without the use of toothbrushes.

Dr. Herman Biggs, of New York, referred to the plan that has been in successful operation in New York for the past year, under which all marriages must be reported to the authorities. Three months later, the health-authorities send a circular-letter to every young married woman, drawing her attention to special information available to her on the problems concerning childhood.

Sir John Lumsden referred to the great work performed by the V. A. D. workers

in Great Britain. He believed that this great body of voluntary workers could perform an enormous service in connection with the proposed Red Cross child-welfare campaign.

At a later session of the congress, recommendations to be proposed to the world for combatting, controlling, and eliminating venereal diseases were discussed.

Colonel E. F. Snow, U. S. A., president of the Association of State and Provincial Boards of Health of North America, acting chairman, said that each country would, naturally, have its regulations according to its own conditions, but, that, in spreading necessary information and in enlightening the public and governments on this topic, the Red Cross League like the one that has been formed could be of much benefit.

Professor Ducrey, of the University of Pisa, said that the program regarding the regulation of prostitution by government is now being worked out in Italy and will be completed within a few weeks. He favored the control of the sale of alcohol and of drugs, as being closely related to the spread of disease. He believed that measures for the abolition of all official regulation and toleration of prostitution would not be possible in some countries, and that each country must act by itself.

Colonel L. H. Harrison, of the British Army, lecturer on venereal diseases in the Military Hospital, Rochester Row, London, said that, in the British Army in 1885, 320 out of every 1000 admissions to the hospital were because of venereal disease. In 1913, these had decreased to 51 per 1000, although at that time no propaganda against the evil had existed and that prophylaxis was not part of the British army-regulations. The remarkable diminution, he considered, was the result of improved social conditions, suitable entertainments and occupations in the leisure moments of the men.

Colonel F. F. Russell, U. S. A., said that there was the greatest necessity, at this time, for an energetic government-campaign, because of the demobilization of armies. Through Red Cross societies, there were means of carrying the lesson and influencing public opinion. There is not a disease in which the patient can do so much for his own cure.

Colonel Cummins, of the British Army, urged standardized regulations in dealing with prostitution. Dr. Herman M. Biggs and Sir Robert Philip advocated a closer and more definite terminology in the discussion of these subjects and suggested that each malady should be called by its proper name and not be grouped under the head of venereal disease. In that way, the education of the people would be easier.

Senator Marchiafava, of the Italian delegation, said that all immoral literature and pornographic books must be suppressed by law.

Doctor Rist, of Paris, said: "I believe that the opinion is growing for a complete abolition and suppression of all official regulation and tolerance of prostitution and that this sentiment is growing even in countries where prostitution has been tolerated heretofore."

Professor Kabeshima, the Japanese delegate, said that the question of suppression of prostitution in Japan was a delicate and difficult one; but, that at the present time there was a movement to make regulation and inspection more strict and to eliminate clandestine prostitution and street-solicitation by women.

Action is expected to be taken that will mark progress in regard to the treatment of the maladies under discussion.

B. Sherwood-Dunn.

Paris, France.

HARD WORK

Hard work is the hammer that drives the nails
Of certainty into success.
Who misses the nails, is one who fails
And works on the job less and less.

Long hits bring applause, but, it's team-work that wins
The pennants for which we all strive.
Tho some, by their wits, may seem to make hits,
None but the workers survive.

There's many a man has all thru life
A promising future ahead,
Who never redeems the pawn of his dreams,
Whose note is a promise that's dead.

The reason most men fall down by the way
Is, that they don't "try, try again";
'Tis surely a crime to waste all our time,
Resolving, not, doing like men.

Do big things this year, determine to win,
And let us all strive with our might.
When we are inclin'd, we always can find
The time to do anything right.

Big opportunities come to big men
My dear boy, remember that fact;
Then, let us grow, so the whole world may know
That when the time comes we will act.

The fellow that lands the orders is he
Who knows how to orders obey,
And if he will work and not try to shirk,
You'll hear his report some fine day.

Nothing succeeds like success, we are told,
But, drones cannot figure out how;
A thing well begun is easily done;
We don't live tomorrow, but *Now*.

HOMER CLARK BENNETT.

Lima, O.

OPPORTUNITIES THAT WE ARE MISSING

Our big-hearted editor, Doctor Burdick, has established a new "Round Table" and invited us all to a seat at it, in order that we may give a reason for the faith that is in us concerning medical and surgical things. I esteem it a great privilege to meet with you and to speak to you some of the thoughts that from time to time have come to me during the past half century—forty-four years in actual practice, six years spent in preparation.

My father was a physician and surgeon for forty years, and I, being born in a doctor's home, grew up in a medical atmosphere and dwelt in it with him for twenty-five years.

To me, the medical profession and the study of medicine have always been an inspiration. Yet, loving these as I always have and still do, I have been cognizant of the fact that often the profession has stood in its own light, by stubbornly refusing to recognize anything new in theory or practice that in any way departed from oldtime standards.

Harvey was loked down upon, so was Jenner, so were those that declared that certain kinds of mosquitos were the carriers of malaria and yellow-fever.

Only the sledgehammer of clinical results, oft-repeated, ever has been able to loosen the bulldog grip of the old deep-rooted prejudice in the minds of medical men. There is manifested an air of "I am holier than thou" whenever one attempts to show that in some not recognized school of practice there, perhaps, may be some germ of truth.

Born, as I was, a regular of the regulars, I walked for some time an allopathic Pharisee. Keep your seats, gentlemen! I am still a regular of the most approved pattern. I well remember the feeling of having done something "below medical dignity" when I prescribed aconite and belladonna in fevers. For, did not the Homeopaths and Eclectics claim priority in their use? And was not I being contaminated by doing this? However, I persisted, and found that I was getting good results and still was a "regular".

When Doctor Waugh, of revered memory, and Doctor Abbott, our senior editor, began to publish a small monthly, which they called THE ALKALOIDAL CLINIC, I said, their contention for concentrates is the right idea. Then and there, I enlisted under their flag, and for these many years I have fought my most successful battles against disease with the alkaloids, resinoids, and all that goes with the term alkalometry, now referred to as positive, active-principle therapy. The older doctors shook their heads and said: "The galenicals are good enough for us. They suited our fathers, they suit us."

At a meeting of the Union Medical Society of Northern Michigan, I mentioned the satisfactory results I had obtained from the use of the active principles, and spoke of the help that active-principle therapy would be to the doctors that would carefully study their nature and use. The venerable president, a scholarly man and really a lovable person, an ex-surgeon of the Civil War, and an ex-member of Congress, quite lost his temper at my assurance at introducing such a subject. As I had used the term alkalometry, he dubbed me a "calamity". I replied that the calamity would surely follow those who failed to consider seriously what I had said. From time to time, as opportunity offered, I talked and wrote of alkalometry, and now it is a rare thing to find a doctor in that part of the state that is not a user of the alkaloids and other active principles and concentrates.

This same president called me a barbarian when I said that for years I had been using pure carbolic acid in treating recent wounds. My method was, and still is, to close the wound with sutures and then to whiten the edges with concentrated carbolic acid. This coagulates the albumin in the tissues (it is not a cautery) an artificial skin is thus produced; the action of the air is excluded, and repair begins at

once. After the first application, there is no pain, no pus forms, and repair is by first intention. And this, too, long years before it was known that alcohol is an antidote to phenol. The use of alcohol is an added help, as any excess of the phenol may be promptly neutralized with it.

The dear old doctor has long since gone to his rest, his memory is revered, and he sleeps in peace; and, yet, the alkaloids go marching on to sure victory and undiluted carbolic acid holds its own.

I wish now to speak of that despised class of practitioners known as Homeopaths. These men have waged a winning fight, and because of their use of small dosage we regulars have been influenced.

When I began the practice of medicine in 1875, 10 grains of calomel was thought a proper dose. Nowadays only 1/10 grain is prescribed, with equally good results. As a rule, I order five 1/10-grain doses, one tablet crushed between the front teeth and absorbed under the tongue, to be taken every five minutes. In half an hour, this is followed by one tablespoonful of epsom salt dissolved in half a glass of water.

In syphilitic cases, 1/10 grain of calomel every morning, placed under the tongue, gives equally as good results as do the massive doses of mercury. There come to us, from time to time, things reported useful in the treatment of the sick, that are not like what we have been taught, indeed, seem contrary to what we consistently believe, and, yet, to err is human. We may have been standing up so straight that we really tend to leaning backward.

The Eclectics have consistently maintained that vegetable remedies are sufficient to meet all the requirements of the practitioner. So far as it goes, Eclecticism is most admirable; but, there is only one school of medicine, and that is large enough to take in and utilize every thought and suggestion that will prove helpful in saving life, and curing disease, and preventing its spread and perpetuation. The time spent in waging war upon any new thing were better spent in putting it to the supreme test of thorough clinical trial.

When the Osteopath found that, by using the bones as levers and adding to them the teachings of the Swedish movements, for securing curative reflexes, he came to the regular profession with it; but, they said, "Begone you are a quack". And, yet, Osteopathy is recognized by the law and, by its means, many troubles are being relieved. This method does not cover the whole domain. The mistake these men make is, to claim too wide a field.

The Almighty never meant that one man, or one school of medicine, or one set of principles should do all the world's work.

Then came the Chiropractor. In regular circles, this word provokes a sneer and cynical smiles. Regular medicine is too holy to countenance any socalled drugless healer. Its devotees assert that all that this fad accomplishes is merely, to exert a psychopathic action and that only the ultragullible are affected by it.

Let us make a test of this and find out what is the result of the final analysis. Hold up the test tube and watch the reactions as we proceed. You are surgeons. You smile and say: "Yes, that is our honorable standing in this community." I reply: "So am I a surgeon. I now address you as chirurgeons." You smile and say: "Yes, that was the title given to our ancestors in the work."

I, too, am a chirurgeon. Now look closely. I am a chiropractor, and so are you all. Keep your seats, gentlemen, the show is not over yet. The word surgeon comes from the Greek word *chirurgeon*. This is a compound word. *Cheir* (*chiro*) meaning hand; *ergon* signifying work. Surgeon—chirurgeon—chiropractor, all mean, to work with the hand.

He that heals disease of the body, such as malformation or lesions, by the use of his hands, either with or without instruments, is a surgeon. When, by means of taxis, you reduce a strangulated or other hernia, set a fracture or adjust a dislocation, you do this with your hands, and without causing blood to flow; in other words, are a bloodless healer. Then, are you stepping down from your dignified position if, by means of proper manipulation, you produce reflexes, remove pressure, and thus relieve pain? Remember that the word manipulate is derived from *manus*, hand.

I now will tell you how, through suffering, I became what you may call, in the phraseology of the street, a Chiropractor, or, rather, I should say how I learned that

the manipulations advocated by the so-called Chiropractors are not all "moonshine".

A dozen years ago I tried to throw an apple with the force and precision that, years before, I had been used to apply when playing on the baseball-diamond. As soon as the throw was made, I was seized with the most excruciating pain in the right upper arm at the lower insertion of the deltoid. I found that certain motions caused no pain, but, others the most acute suffering. I found that I could not dress or undress without aid. I was at a loss as to what had occurred. I consulted physicians and surgeons from time to time. This continued for two years. One college-professor said that the musculospiral nerve was ruptured. One skilful surgeon nearly killed me by trying to reduce a suppositious shoulder-dislocation, but, which turned out to be mythical. Every imaginable remedy was tried, only to be abandoned. In my office, I had a heavy vibrator. I had found that, by vibrating one particular spot over the spine, between the scapulæ, I got temporary relief. One day, as I was lifting the vibrator over my shoulder, it fell. I caught it just as it fell, with its rapidly vibrating ball striking against my spine. There was a sharp snap, and my pain was gone. I found that the limitation of my arm's motion had disappeared; I now could raise my arm and make movements of which I had been deprived for two years. I had been thought a malingerer, for, I had nothing to show to explain my pain. There was no swelling, no discoloration; and, yet, I was a sufferer. However, this was all over now and has not returned.

As for the explanation: In throwing, I had twisted the spine, thus producing pressure upon one of the strands of the nerves that go to make up the brachial plexus. The reflex was felt in the upper forearm. At about this time, Doctor Gregorie's book on chiropractic procedure, published at Oklahoma City, fell into my hands. From it, I learned why I had suffered and why this simple (accidental) procedure cured me.

A few years ago, I was visiting a country institution where were many infirm and crippled people. I talked to one man who wished me to look over his arm, saying: "I do not wish to remain here. I am a carpenter and was earning a living when I fell from a ladder, dislocating my right shoulder. The doctor sent me here, as I had no home, and this was the only place where he could care for me. He set the shoulder, but, I can not use my arm. This was eighteen months ago. I wish you would look and see whether my shoulder is properly set." The fellow was so helpless that he had to be assisted in dressing. I had him stripped and found his shoulder all right; however, I found the spine deflected. He was laid flat on the floor, face down. I placed my closed hand, with palmar aspect down, upon his spine, the little-finger side on the vertebra that I wished to move, stiffened my elbow, making a straight arm. Thus, with a blow from the shoulder, I gave a powerful thrust upon the spine toward the painful side, the weight of my body aiding the impact. With a loud click, the vertebral bone went back into its place. When the man arose, he found that he had begun to regain lost movements. Little by little, the use of his arm came back and soon was able to leave the institution and resume his occupation.

The surgeon that had set the shoulder had done all that ordinary surgery could suggest. When he had done this, he went to his home, feeling justified, and slept the sleep of the just. And, yet, because he did not think, he left a helpless cripple suffering in the almshouse.

John Fisk said that it is impossible for the human mind to concentrate itself upon one subject continuously for five minutes. The surgeon of whom we have been talking did not take into consideration that a man weighing nearly 200 pounds when falling from a ladder and striking upon his shoulder might, possibly, have sustained a deflection of his spine, as well as a dislocation of the shoulder.

Now, when I replaced this part of the spine that was out of alinement, I did it with my hands, and the performance was bloodless. Gentlemen, what I did you can do, and not lose caste by doing it, either.

But, one more case. I could entertain you for hours with clinical experiences of the most gratifying results, both to me and to the patient, of patients treated in this way.

A Polish midwife said to me one day: "Doctor, there is a poor woman, with a house full of children; she can not walk, she cries all the time because of pain in the calves of her legs. Her baby is dead;

she has had many doctors, but, they can not cure her. She can not pay you. Will you go just once?"

I found things as described. I was the tenth doctor to see her. She could not stand nor feel the floor under her feet. I could not understand a word of her language nor she of mine. We communicated by means of an interpreter. I asked whether she could lie flat on her face. She said no, to move, would be, to kill her. I told her there was nothing the matter with the calves of her legs. We had her laid prone and I made adjustment of the lumbar spine, whereupon she was able to turn upon her back unaided, while the pain had left the legs. She had had an instrumental delivery and it was, I believe, a very hard obstetrical case. When I came to her, the temperature was 104 degrees. I gave her proper medical treatment, and in three weeks she could walk and I was not needed any more. One doctor had said to me, "You can not cure that women, she has locomotor ataxia". Now I wish to know whether this cure was merely a psychologic one or the result of straight scientific procedure, seeing that the patient could not understand my language?

Please, pardon my garrulousness.

There is now before us the zone-therapy. The human body has its nervous system divided into zones. Zone-therapy is simply pressure upon certain nerves (hence, properly also termed piesotherapy), either in order to produce reflex action or to obtund sensibility.

A woman came to me suffering from pain in her left lower maxilla, the pain involving the neck. She had had a very expensive time with the dentist (crowns and fillings) and did not wish to have any of these removed. She also was anxious to attend a convention soon to be held in a distant city. I said, "Go to your dentist, he is the man to consult". She replied: "I have been to him, and he says that he can not find a possible reason for the pain, as the teeth are all right and that extraction of a really good tooth would be the only possible solution of the trouble. He advised against this and said, 'This is a case for the doctor'". In my younger days, while engaged in the study of medicine, I did study and practice dentistry, hence, had some clinical knowledge of dental troubles. I had just been reading up on zone-therapy when this woman consulted me.

Here, I thought, is the place to try out this piesotherapy. So, I instructed the woman's husband to insert his thumb in her mouth and press the ball of the thumb over the inferior dental foramen on the painful side, the fingers to press upon the outside of the cheek opposite the thumb. Presto! firm pressure stopped the pain. They sat up all night. As long as the pressure was kept up, she had no pain. In the morning, as I had instructed, they found another dentist, who said: "All I can advise is, to take out the wisdom-teeth. Your teeth are all sound—this is only a guess—but, worth trying." So, a perfectly sound wisdom-tooth was extracted, whereupon the pain in the face and neck vanished. I am telling you this, so as to arouse your curiosity regarding zone-therapy, and to give you a dental tip on the side.

The combining term *spondylo*-signifies spine or backbone. The treatment called spondylotherapy consists in eliciting certain reflexes by means of percussion of the spinous processes of the vertebræ. The results from this procedure are both interesting and surprising. I tell you that, by percussing the spinous process of the seventh cervical vertebra for ten minutes daily, after a few weeks of such treatment, you can see a diminution of a goiterous growth. This certainly is not a psychologic phenomenon. I have done this repeatedly in the case of patients that had no knowledge of what was expected by me.

C. S. Cope.

Detroit, Mich.

LOOTING THE LOOT

The Plumb plan and the National Transportation Conference plan (the latter hereinafter designated N. T. C.), for legislation now before Congress, are contrasted by you in The American Journal of Clinical Medicine for October last (p. 679) under the caption "Heads You Win: Tails I Lose."

You have started something in the eyes, chiefly, of the medical world which we assume you are willing in all fairness to finish.

A matter, you think, so important to every man, woman or child that a medical

journal should go on record regarding it, as you have done.

But, I ask, why not be fair and cut out your evident prejudice? The N. T. C. plan, you state, "contemplates the return of the railroads to *their owners,* to be operated by them under such federal supervision as will protect alike the interests of the public, the stock holders, and the employes."

To my way of thinking, with a little alteration, these aims, with the exception of "return to their owners to be operated by them," can be attained better by the Plumb plan.

The Plumb plan, you state, is "operation under the control of the railroad-brotherhoods." This is misrepresentation of fact and is misleading, as their operation is by a composite board of control in which government, officers, and men are represented.

You state "the issue is now between class-interest," meaning, apparently the brotherhood-working-men class; "and public interest," meaning apparently the private owners whom you camouflage with the words "public interest."

The latter is sheer prejudicial assumption and assertion and is not evidence in our argument—which does not look well in comparison with your contention "not to dodge or side-step."

The N. T. C. says "give the railroads back to their owners."

Well, let us go back (if it is backward you want to go) to the original owners, the thirteen colonies, when there were no railroads and no public money to build any.

A charter was given to men who had money or could get money, and these built the railroads. A charter implies a temporary arrangement and without the donors relinquishing their original rights. It was a privilege, not a right, of highway. The fact that rails were laid to facilitate the business made no difference. The right of highway remained and remains with the public the same as, now, in the case of country roads which may not be given away.

The railroad companies assumed ownership, and built up vast systems including the use of public highways, which by common consent has never been challenged.

But, the thirteen colonies, now grown to 48 states, can and should annul the charter. Authority for this is found in the original inalienable *Rights of the Public at Large.*

The Plumb plan proposes that the courts shall decide the value of the private interests in the railroads and that this valuation be honored dollar for dollar in United States Government bonds, interest being paid thereon until liquidated. This does not mean "the immediate expenditure of 20-billions for outright purchase," as you unfairly state it.

Nor does it contemplate as, you state, the N. T. C. does, "the loan of half a billion to help put them on their feet." Alas, poor infant.

The Plumb plan has its own feet to stand on and work its way to success in a clear and clean title in public ownership!

The N. T. C. is a hopeless infant if, after all these years of nourishment, it cannot stand "on its own feet."

You call *The New York World* to your aid in its statement of looting the loot, which says, "the difference between the Wall-street looting system and the Brotherhood looting system is, that Wall street provides the original investment for its operations."

And, the H_2O (water) too, lest you forget: "while the Brotherhood insists that the people of the United States must furnish the money;" and, by eliminating looting the public, save for it the H_2O.

The N. T. C. plan to be submitted to Congress you outline in several paragraphs, which I should like to consider serially.

1. To return the railroads to private ownership, and so on. The Plumb plan absolutely opposes this. Who are these "private owners"? Are not they a class seeking this legislation? You will not deny that they are a small fraction of one percent of the entire public, and, yet, you blame two percent of railroad men as wanting a "sure thing" against the ninety-eight percent. Even if the latter were true, which it is not, it would be the lesser of two evils in the Plumb plan.

Who are these "private owners," so small a fraction, who are to have and to hold this entire, this vast privilege? Why place these little blocks in the highways of public progress? Progress is no respecter of persons. Progress is no more a re-

ter of persons than is the typhoid-fever germ (in the H_2O), the measles or "flu."

2. Consolidation of existing railroads into strong competitive systems.—The Plumb plan is for *cooperative* systems.

3. All carriers to subject themselves to federal jurisdiction, et cetera.—The Plumb plan is for precisely this same thing.

4. To organize a Federal Board of transportation, et cetera.—The Plumb plan eliminates this "human hazard," for, experience shows that corruption creeps into special groups of men.

5. The establishment of three funds: (a) an individual railroad contingent fund.—The Plumb plan recognizes no individual railroad; (b) a general railroad contingent fund;—the Plumb plan provides sufficiently against all contingencies or accidents to success; (c) a railroad reserve fund consisting of a 500-billion-dollar loan from Congress.—The Plumb plan lets the people keep this sum of money and carries the load for the necessary time in Government bonds paid as we go, by excess profits and moderate easy taxation and, in the end, having and holding something worth while. And "Jay" "stock speculators" will be out of a job.

6. Threats to compel Congress, even threats not veiled are charged against the railroad-brotherhoods. — The Plumb plan action is intended to be in due legal form.

7. Lastly. It is contended that, in the Plumb plan, control by a two-thirds majority is placed in the hands of the railroad men. In this contention, I concede that you are right. And, in this particular, I propose a change or amendment in the Plumb plan.—The Plumb plan proposes "A Board of 15 directors, 5 named by the President to represent the public; 5 elected by the operating officers; 5 elected by the classified employes." I offer as a change or amendment to this: that the operating officers elect 3; and the employes elect 2. This makes 5, an equal offset to the public's 5. Or, in this ratio whatsoever be the number. This creates an equal balance of power and, in the case of a tie or dead-lock, the President, acting through Congress, shall have the deciding voice. Thus, an efficient Board operating the railroads would have it all their own way except in case of a tie or dead-lock.

This aggregate management makes each unit a part of the aggregate head; it will eliminate strikes and insure peace. Each man, being a part of the aggregate head, would not think of striking. Nor would he have any standing if he were to do so. Would a man put an embolus into his own bloodvessel system? or a monkey-wrench into the machinery of his automobile (if he had one)?

This plan eliminates the need of the senatorial antistrike railroad bill now before the Congress. Other features of this railroad reorganization bill now before Congress might, if advantageous, be incorporated with the Plumb plan bill.

An antistrike provision, concurrent or not, with the N. T. C. plan to return the railroads to private owners, at once makes the worker a slave, and deprives him of his inalienable right of autonomy, unless one means the autonomy of an automobile, and, we believe, is unconstitutional. It is Imperialistic.

It is complained that "the Plumb plan says nothing about who is to bear the losses if the balance should be upon the wrong side of the ledger; that is to say, who would be 'the goat.'"—Within solvency, there would be no "goat." For, who can imagine the aggregate railroads of these United States insolvent, since they are run at all? When our country quits let's all quit.

And now, finally, your allegory of the cow. "Uncle Sam buys the cow, feeds her, takes the risk of her getting sick and die; and, then, the hired man, after getting the wages, takes half the milk.

Suppose the cow does "kick the bucket." Uncle Sam has become fat on the cream. Being fat and in good fix, he could engage in some other business than railroading, when these go broke, and quit. Moreover: no one would care for a dead cow's milk.

It seems a pity, though, that the railroad should run over a cow to insure success. It deprives the stock of its water, and the cow of her loot.

H. L. Green.

Quincy, Ill.

—

[The object of an argument is, to convince, and it need scarcely be pointed out to Doctor Green that this is not accomplished by personalities, nor by ridiculing and misrepresenting the opinions of an opponent. The sole object of the editorial of which the correspondent complains was

to set the readers of CLINICAL MEDICINE to thinking on a subject that is universally conceded to be of supreme importance.

The railroads form a large, perhaps the largest factor in the prosperity and welfare of the country. They have got into an unfortunate predicament, through causes perhaps partly of their own making, but, largely, through events over which they had no control. We all are interested in discovering the best way to get them out of this predicament. A mistake in this matter would be a national catastrophe.

Government management has not shown itself to be a brilliant success, either with the railroads, the express companies, the telegraph, or the telephone. Competition makes for efficiency as a matter of self-interest. Men will conduct a business as efficiently as possible so long as they see a chance of getting a reward for their labor and their talents.

When we speak of returning the roads to their owners, Doctor Green seems to assume that the whole people of the nation are the real owners. In a certain limited sense, of course, that is true; but, in a more intimate sense, the owners are the people who have furnished the capital that built the roads. That includes a class of people that, often, are ignored by those who look upon all capitalists as robbers; namely, the widows, orphans, executors of estates, life insurance companies, and trustees, who have invested their savings and trust funds in railroad securities. Not all the capital to build the roads was furnished by the wicked pirates of Wall Street.

The great reason for being wary of committing the country to the Plumb plan is, that it is an experiment. Nobody *knows* how it will work. The brotherhoods *think* they do, but, that is only their belief; and, there is a vast difference between knowing and believing. The N. T. C. plan is based upon principles that have proven sound in long years of business experience, and it does not seem unreasonable to believe that a plan based upon tested principles is safer than one based upon an attractive theory, especially when billions of dollars are involved.—ED.]

CHLORAZENE INTERNALLY

In your last issue, I saw a letter from a New York doctor on the internal use of chlorazene, and, as I have been suffering from intestinal indigestion, causing accumulation of foul gases, I determined to try chlorazene internally, and wish to add an old man's tribute of praise for it. I took it in ¾-grain doses with bismuth subnitrate as a vehicle. I have used intestinal antiseptics, whose name is legion, with varying degrees of success, but shall award the palm to chlorazene, taken three or four times daily.

I mentioned it at the last meeting of the Riley County Medical Association, for, I believe that, in it, we have a good remedy. I have used the powder as a surgical dressing and think I know a good thing in medicine when I see it after over forty years' practice.

Ed. Atkin.

Ogden, Kans.

CHLORAZENE INTERNALLY AGAIN

You have reason to be proud of the November number of CLINICAL MEDICINE. It is worth the price of a year's subscription. However, I am not writing to give you taffy, but, to tell you what happened to me when I took ¼-grain of chlorazene for intestinal indigestion, as advocated by Doctor McCready in his most excellent article on the internal use of chlorazene.

I have used this best of all antiseptics ever since it came out, as a surgical dressing, and always with most gratifying results, but did not consider it safe for internal use until I read Doctor McCready's article and noted his splendid results. As I am a sufferer from slow digestion, gas, and autointoxication, I thought, here is a remedy worth a trial. I placed ¼-grain of chlorazene and 10 grains of bismuth subnitrate in a capsule and took it with a glass of water, about one and a half hours after dinner.

In three minutes, I knew the "lid was off," as I rifted chlorine gas and felt myself getting warm all over the body. My hands were swelling and itchy, my face was swollen and scarlet, my lungs were congested, breathing was difficult as though an attack of asthma were impending. I realized that I was poisoned and, calling my wife I had her prepare for stomach lavage. It always has been an easy matter for me to wash out my stomach, but, this

time, for some reason or other, the tube became clogged and would not work; so, I abandoned that method and took a teaspoonful of mustard in a glass of warm water. This emptied the stomach partially, and another trial with the stomach tube was successful. I began to get relief.

By this time, I was covered with bold hives and the itching was intolerable until I had dusted my body with boric acid. The swelling of hands and feet continued for 36 hours, and I felt great weakness and nervous prostration. I truly believe, had I taken the ¾-grain dose which Doctor McCready used, that it would have proved fatal in my case.

Have any other doctors had experience with the internal use of chlorazene? Kindly give me your opinion as to the "why" of the symptoms I experienced.

J. M. Watt.

Bedford, O.

—

[The editor is inclined to think that Doctor Watt's experience is due to some other cause than the chlorazene which he took. We know of dozens and dozens of people who are using chlorazene in the mouth as a gargle, and who habitually swallow the solution; of others who have taken the tablets by mistake; of some who have actually taken the full-size tablets therapeutically; and of more who have followed Doctor McCready's plan of combining the chlorazene powder with some other substance, such as charcoal, agar, or bismuth, and thus far the only complaints we have received have been some two or three instances of more or less discomfort or inconvenience.

However, we never have recommended chlorazene for oral use because we still are ignorant as to just what takes place when it enters the stomach, but we have received enough information to convince us that, properly employed, it is an oral remedy of very marked value. The experience of Carnot and Bondouy, and of McCready, as well as of a number of other physicians who have written us personal letters describing the results obtained, certainly point to the probability that some of these days chlorazene will be put out in a form especially adapted for internal administration, and that in properly selected cases it will do great good.

Here, though, is a thought that places an entirely different construction on Doctor Watt's experience. His symptoms soon after taking chlorazene were as follows: he felt himself getting warm all over; hands and face were swelling; the skin was itchy; there was redness of the face; lungs congested; breathing difficult as in an impending attack of asthma. Soon later, there was an attack of urticaria (hives). There was great weakness and nervous prostration.

These symptoms are classical for an anaphylactic attack. Now, anaphylaxis is the result *only* of protein sensitization. It is a storm produced by the absorption of split proteids. If the chlorazene was instrumental in bringing it about, it could have been so only by causing a sudden disintegration of certain foodstuffs that were lodged in Doctor Watt's stomach.

The question, therefore, is, just what had been eaten inside of, say, six hours before taking the chlorazene. We make this long time limit because Doctor Watt seems to be afflicted with delayed gastric motility.

While this explanation relieves the charge against chlorazene in a way, we still hope to receive complete information, because it will serve to fix certain precautions that may have to be taken in prescribing chlorazene internally. Several members of the editorial staff have given the substance to patients freely and never have observed any injury or distressing or disagreeable symptoms whatever.

Intravenously as well as orally, chlorazene seems to have a future. It has been used by Copeland (*Canad. Med. Quart.*, Sept., 1919) in the treatment of puerperal septicemia, with cures in ten out of twelve cases in which it was so employed. It has likewise been used by Graham and Detweiler (*Jour. A. M. A.*, 1919, March 9) in treating anthrax occurring in human patients and in a variety of other conditions. If you have not read the abstract of Copeland's article (Amer. Jour. Clin. Med., Nov. 1919), we advise you to look it up.

Meanwhile, we hope that we may have reports from every physician who has used chlorazene internally. We want to know just what it will do and just what its limitations are. We can only get this information from you men in the field. Please give it to us.—Ed.]

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

The Actual and the Ideal

[*Continued from December issue, page 871*]

THE ancients, in order to signify One First Cause and One Rule, feigned that the universe is at one end of a chain, the other end of which is linked to Jupiter's chair; and they embellished the conceit with the beautiful myth of Iris, the personification of the rainbow, which is formed by the waters rising from the earth as it is shone upon by the sun in the heavens. Iris being the messenger whom the gods dispatched to fetch the waters of the Styx, the river of the lower regions, the symbol signified that only the light of truth is required to render the lowest object lovely; or, as the Hebrews put it, "unto the pure all things are pure." So, if we take a strong microscope and examine the ugly bark of the most gnarled and hideous tree in the forest, we discover that these gnarls and knots and unsightly seams are, in reality, exquisite patterns in ferns, flowers, birds, and all manner of wanton forms in the perfection of natural beauty.

—

These lovelinesses of nature, springing into life by aid of the proper intelligence with which to see them, by the aid of science, present us with the plan of the creative system. Much, very much, is ugliness on the outside, but, why? Merely because we do not have the eyes to see beneath the surface. If there are those who recognize no beauties in nature, because they lack sensual culture, there are those, also, at the other end, who stand above nature and look through it to the higher beauties that nature stands for; as the poet, who at first, in his green youth, busies himself with buds, birds, moonlight, and the roar of waterfalls, at last, having risen to the top of his condition, sings of the soul of man—as did Homer, Virgil, Dante, Shakespeare, Milton, Valmiki, and others.

Socrates shuns the woods and fields and frequents the marketplace, where he can meet with men, with all kind of men, the lowest and the highest. We see the same progress in the history of the plastic arts; so true is this that all arts as well as all natural objects are but different expressions of one and the same beauty. In India and in Egypt, the artist, for lack of skill, was forced to make a rude semblance of an eagle when he wished to convey the idea of power, of a serpent, to convey the idea of cunning, of a dove, for peace, of a bull, for strength. Hence, the horrible aspect of their idols! But, in Greece and in Italy, having learned the dependence of form upon soul and having joined that knowledge with the skill of the artizan, they were enabled to express all the passions and all the attributes of the mind in the faces and forms of their statues.

Thus we learn everywhere that the proper study of mankind is man. If Bacon will study nature, Descartes will study himself; for, says the latter thinker, a wise man may best study nature by looking into his own soul. The Italians have an aphorism, which says: "All the world is just like our own family." If we wish to know another man's motive, we have only to put ourselves into his place and study ourselves. But, this is the difficulty; to see with his eyes, feel with his heart, know with his brain, understand with his mind. And unless we can do this, our view will be erroneous, and for that we ourselves must suffer, not he—just as those poets and cynics who, because the world will not accept them at their own valuation, misunderstand the world as it misunderstands them, and are miserable accordingly, ascribing all the blindness to the world.

—

Our microscope of love often must be of many hundred human diameters in or

der that we may penetrate, by its means, another man's gnarls and knots and see the beautiful patterns beneath. Yet, the first thing we say is, that there are no such patterns. Fortunately for him, if he is true, he does not need that you should be convinced. "He who does good principally for his own satisfaction," says Montaigne, "will not be much troubled to see men judge of his actions contrary to his merit." For, as nature takes good care to furnish all her products each with its proper armor, so she equips the pure soul with impregnability. "True happiness lies within; the other is but a counterfeit felicity," says Seneca.

But, this impregnability can grow only from truth. The self-sufficient and wooden man is a shining mark for the arrows of humiliation and pain; and, although self-styled judges of character, of human nature are almost as numerous as are the citizens, yet, those who study chiefly themselves have been the masters, knowing, as they do, that the revelations visible to them in the features and acts of others are mixed effects—the product both of the observer and the observed, and, therefore, are false; as, if we look at an object through colored spectacles, we give it an appearance that does not rightly belong to it.

—

Goethe, incontestably one of these masters, says, with the candor of wisdom, "I never see a fault which I might not myself have committed"; meaning that in the same circumstances all men will act pretty much alike; that it is not the man who is bad, but, that it is the circumstances which prove too strong for him, as they also would for other men. Here is a basis for that manly view of our neighbors, which, if we accept its principle understandingly, will insure us much felicity. "Forgive them, they know not what they do." Do not forgive them for their sake, but, for your own sake. It is the forgiver, not the forgiven, who exults; for, that he can forgive, is evidence that he stands above the dead level of aggressive, stupid, wrangling humanity and knows at least something of the reason and aims of his existence as a man, and not as a beast.

Nor is it required that a man shall be world-famous, as Goethe was, or even that he shall be known outside his own circle, however lowly it may be, in order that he may rightly fulfil the conditions of life as it was given him to live it. Indeed, if we may believe with Carlyle, Fichte, Emerson, Schlegel, Shelley, Shakespeare, and others who were themselves great, as men regard greatness, the most illuminated class of men, the class that lives its life in the manner nearest to true perfection, is, by the very nature of things, among those who, preferring their own good opinion of themselves above that of strangers and posterity, pursue their way so quietly in the simplicity of their rectitude that no whisper of them ever floats abroad and the greatness of them and their good works are never dreamed of by the world. They may be even nonentities among the mass of their very neighbors.

Undoubtedly the loftiest minds the world has ever known have belonged to this class. Those are but small-great men who have projected themselves into glittering history. As for duty, that bugbear which has delivered so many terrific shocks to good, weak souls, frightening them forth to attract ridicule, persecution and death, Lord Lytton says, without encountering contradiction: "He who is truthful, just, merciful, kindly does his duty to his race and fulfils his great end in creation, no matter whether the rays of his life are not visible beyond the walls of his household or whether they strike the ends of the earth." "To reform a world," says Carlyle, "to reform a nation, no wise man will undertake; and all but foolish men know that the only solid, though a far slower reformation, is what each begins and perfects on himself."

—

But, generalities, thought they may be fine and elevating reading, fail to add to our happiness, unless we apply them to the little particulars. The man who says "I am only a carpenter" or "I am only a doctor" must have found no more benefit in the reading of Shakespeare, Goethe, Horace or Emerson than that pleasure he derived from the reading; for, if he had not missed the true meaning of these seeing minds, he would have understood that the vital question is not concerned with the rank one holds in society or trade, but, is wrapped up completely with the

position held by a man in the scale of the soul and nature. No great man has ever busied himself with those superficial differences that mark distinctions of occupation, of rich or poor, of society and ostracism. The real question is always as to whether we are men or only shadows of men. And the higher up we find another man to be, the more are we to emulate him; and the lower down he seems, the better we can afford to show him by example to what heights of love and manliness and magnanimity and helpfulness it is possible for the human soul to rise. It is an old observation that, in refining ourselves, we insensibly refine others—wherein lies the secret of the difference between ill-breeding and culture, between discord and harmony, between chaos and the golden age.

—

It is in these little everyday affairs that we win life or lose it. Existence must be coarse and rude and ugly if we do not carry our microscope of love with us everywhere. If we look understandingly, we must say either that there are no common people—for, all have the divine spark somewhere within, awaiting only our own breath of love to start it into flame—or else that all people are common. For, while there are paints and putty and varnishes and veneers of society, trades, and professions, these are superficial and nothing, (unless we choose to make something of them), like those geniuses who, though they despise the opinion of the world, according to their own words, nevertheless miserably mourn the world's neglect of themselves. We see, when we put our egotism aside, that all men are, at bottom, the same, all desirous of the good and beauty of life, differing from each other principally in the degrees of intelligence with which they judge what these are and pursue them. Nobody will doubt that the shy and uncultivated person who suddenly finds himself in refined company is fervently desirous of observing the proprieties; yet, what a mess he makes of it! But, as soon as we have put him at ease by overlooking his awkwardness and convincing him of our esteem, he becomes at once quite the natural gentleman, full of kindness and grace. Thus, even common politeness reinforces nature and the arts and furnishes a beautiful hint for the safe conduct of loftier affairs. The man in the street, the evil, grasping, beetlebrowed ruffian of business is typified by this awkward simpleton in a drawing-room. He would do well, but, does not know how. Let us who do know how teach him by example. He never ill learn in any other way. And, if we do not teach him by example, he will grow worse and worse until the very stench of his degradation will smother him off the earth.

—

To name the most frequent cause of failure and unhappiness, both in society and out, is easy: men think and work too much for reputation and environment, and not enough for character. For, our reputation, even should it be what we desire it to be or believe it is (which it rarely or never can be), is but a vague phantom in the eyes of others, which is easily destroyed or smirched, while character is something, firstly, for self, whose equilibrium no power of earth or hades can disturb; and, secondly, for others, who, merely seeing it in you, will become elevated and refined in some degree in spite of themselves; as, observe the involuntary respect of the corner-loafers for a lovely woman who passes by.

This pursuit of character, instead of mere reputation, is the head and front of the whole social system, and, if we go far enough back in the history of the world and of philosophy, we will find that the groundwork of society as it exists today in America and Europe is based upon the axiom of the ancient Aryans who were our forefathers, that a man's character is indelibly indexed to the discerning eye by his condition, his circumstances.

The anthropomorphism of this spiritual fact first became visible in the ancient systems of caste, and comes down to us through Rome and England in modified forms, the principle, though, remaining the same. That very disgust for trade, in England, whose own prosperity is founded upon trade, arises, ultimately, from the principle which Thukydides expressed, twenty-three hundred years ago, when he said, writing of earliest Greece, "Through desire for gain, the lower orders submitted to be slaves to their betters", and which Seneca voices thus, "Servitude seizes upon few, but, many seize upon her." In short, the desire for material gain is the mark of

a vulgar mind, as indicating more respect for show or ease than for simple manliness.

Yet, there must be some gain, in order to support life, and wisdom and culture can alone determine the methods and boundaries of this gain. The question for individual proof is, whether a trade, a profession, a business, a science, an art or agriculture is the higher in the scale of the soul, or whether one is not as high as another, the dignity of each depending upon the individual worker—one being no more refined than another and no less necessary and valuable to the harmony of the universal whole, as well as to the individual? It was Victor Hugo, I think, who said: "The great seem great to us simply because we are on our knees: let us stand up"—stand up, not by changing our occupation, not by attaining wealth and glitter, not by any alteration whatever in outward matters, but, by realizing and practicing our equality with the best, so far as love, kindness, mercy, broad judgment of others, and helpfulness go. This is the ideal state for a man, whether he is known to the ends of the earth or only to the confines of his village, wholly regardless of opinion concerning him or of circumstances.

—

But, so closely are we wedded to the letter instead of the spirit, so blinded are we by the dazzle of the outer order of wealth, power, material luxury, that hardly will any man believe this self-evident truth. It is hard for him to believe, because he does not wish to believe. It is things he wants, not ideas of things. He does not yet know that things will bring him no advance, no happiness, but, will come to him, if they come at all, loaded down with responsibilities that will rob him of all joy in their possession—does not yet know that the only true happiness lies within, regardless of circumstances, and that all the outer order is only the show of what should first exist in the mind of the possessor or beholder in order that he may enjoy it as a whole or in any of its parts.

Too often this desire for the shadows instead of the sunlight of life has been implanted in him in his very childhood by those to whom he looks up for guidance, who urge him to coin his little efforts into money and put it in the tin-bank, urge this with such persistence and reiteration that he comes to think this is the whole meaning and sum of life; that, to acquire is, to be happy and ideal, and that, to get more than any of the neighbors is, to be the most ideal and the most happy among his fellowmen.

Thus, is his mind concentrated, if he is amenable, upon the outer order as the aim of existence, and either he rapidly grows to be a millionaire by the socalled legitimate channels of trade or, failing in this—as so many must do, by the very nature of things—becomes an impotent scoffer at the methods of those who have succeeded in applying the very precepts which he himself has endeavored to put into practice, in which he has been unsuccessful, through lack of brains or conditions. This, we must admit, is a common picture of twentieth-century life.

And how can such a man act otherwise, since he never has had held up to him the light of the ideal, never has heard the faintest whisper of the effulgent glory which is the heritage of the seeker of truth, as distinguished from the worker for things! He can not know that the successful man is no better off than he, that he still is a man, with the same hopes, fears, desires, temptations, miseries, failures, and unattained and never-to-be attained longings that he and all other men have. He is unhappy, and ascribes his unhappiness to the outer order, to men and events, circumstances and things, with never an inkling that he is merely fulfilling the object of his being, which is, to learn, by those experiences demanded by his particular character and nature, the lessons that shall make him sooner or later a whole man.

—

But, there are other men, who, as children, have enjoyed greater advantages than has this average one, men who as children have been filled with noble sentiments by communion with superior minds and who in youth or young manhood start out into the great world to work noble triumphs and fulfill the glorious ideals that possess them as a fire of holiness.

[*To be continued*]

Among the Books

HOLMES-RUGGLES: "ROENTGEN INTERPRETATION"

Roentgen Interpretation: A Manual for Students and Practitioners. By George W. Holmes, M. D., and Howard E. Ruggles, M. D. Illustrated with 181 engravings. Philadelphia: Lea & Febiger. 1919. Price $2.75.

In this book of 200 pages, a great deal of valuable information is to be found, but, it is unfortunate that, in so small a volume, there is undertaken a discussion of diseases of the intestinal canal and genitourinary tract.

The greater part of the halftones are the reverse of the Roentgen-ray plates, which fact does not add to the ability of the beginner to compare the book-plates with actual Roentgengrams.

Chapter VI, devoted to joints, tendons, and bursæ, contains some very valuable points. The mistakes in most publications concerning Roentgen-ray technic and interpretations consist in illustrating absolutely typical (pathognomonic) cases.

Chapter VII, devoted to heart and lungs, shows excellent preparation; however, no device has as yet been found to reproduce the minutiæ of detail in the original skiagram; hence, the illustrations have not the value of the plates.

The table on ossification of the bones checks up very nicely and is valuable, for reference, both to the beginner and the advanced worker.

F. O.'H.

IVY: "INTERPRETATION OF DENTAL AND MAXILLIARY ROENTGENGRAMS"

Interpretation of Dental and Maxillary Roentgengrams. By Robert H. Ivy, M. D., D. D. S. With 259 illustrations. St. Louis: The C. V. Mosby Company. 1918. Price $2.50.

The reader is beset with the *pro* and *con* ideas of extraction of pulpless and devitalized teeth. The author shows, in the last part of the chapter, a leaning toward "safety first" (meaning extraction). The illustrations are reproduced in the original color of the film and plate. This is of great assistance to the tyro in learning to read plates and films.

Regeneration of bone is supposed to be fairly well established at three months. This is rather early for the process, but, later on in the volume, in the reading-matter under the dental films, attention is called to the bone regenerated after one year. An excellent point is brought forth in the statement that pressure from regenerated bone may cause unexplainable neuralgia.

Stereoscopic film-holders now on the market will save the reader the trouble of mastering the technic of mounting the films, as instructed in Chapter VI.

The method of locating the position of unerupted teeth (p. 76) is excellently explained.

Chapter IV, on the correlation of different tests for vitality of teeth and checking up on films, is noteworthy.

F. O.'H.

THE PHYSICIAN'S VISITING LIST FOR 1920

The Physician's Visiting List for 1920. Sixty-ninth Year of Its Publication. Philadelphia: P. Blakiston's Son & Co. Price $1.25 to $2.50, according to style.

Blakiston's Physician's Visiting List was first published sixty-nine years ago and still remains in great favor with general practitioners. During the many years of its existence, it has kept pace with advancing knowledge and experience, the suggestions as to treatment of poisoning, of asphyxiation, and so forth, also, the information concerning mortality tables, dose tables (U. S. Pharmacopeia 1916) and other topics having been revised constantly.

The record portion of the visiting list is the usual one providing space for the records of visits and office calls, for ad-

dresses of patients, of nurses, for accounts, vaccination, and obstetric engagements, births, and so on.

LA VAKE: "OBSTETRICS"

Talks on Obstetrics. By Rae Thornton La Vake, M. D. St. Louis: C. V. Mosby Company. 1919. Price, $1.00.

We have had a surfeit of large, complete, and expensive textbooks on obstetrics, with costly illustrations. Many of them were written by well known specialists and are indispensable in their proper field, but, for the busy family doctor and especially for the beginner, they contain much superfluous material. Hundreds of general practitioners have wished for something more concise and more practical, and, this little book was apparently designed to supply that want.

The author discusses frankly all the most important difficulties that are met with in general family practice. On the whole, her advice is sound and in the right direction, although it may well be questioned whether her fear of infection is not extreme, and whether it has not led her into danger in the opposite direction. In trying to avoid Scylla one may plunge into Charybdis. Most men who have practiced obstetrics during a lifetime would not agree with the assertion that a piece of retained placenta had better be left alone for nature to remove, for fear that removal by hand might convey infection. The doctor who deliberately followed the author's advice might fare badly at the hands of a jury.

Furthermore, many men of large experience would fail to approve of the recommendation to abolish vaginal examinations in favor of rectal ones; or of the author's fear of chloroform; or of her advice to convert a face presentation into a vertex presentation by flexion.

The book has two notable omissions: The author makes no mention of the value of digitalis in the treatment of albuminuria of pregnancy; and, in discussing manual rotation of the head in an occipitoposterior position, she speaks of its slipping back. If she will try rotating it a half circle instead of a quarter circle, it will not slip back.

While every young doctor should read this book, he should also be informed that some of its ideas are not universally accepted. Then, as he gains experience, he will learn to judge for himself. *Good judgment is better than rules.* The ideal should not be, to follow any man's rules blindly, but, to think for one's self. The man who gives a fair trial to digitalis in albuminuria, to veratrum viride in eclampsia, or to manual rotation through 180 degrees in occipitoposterior positions, is not likely to need any arguments in their favor.

SUTTON: "DISEASES OF THE SKIN"

Diseases of the Skin. By Richard L. Sutton, M. D. With 833 illustrations and 8 colored plates. Second edition, revised and enlarged. St. Louis: The C. V. Mosby Company. 1917.

This is a rather ambitious volume of close to 1000 pages of text, the second edition of which became necessary only one year after the appearance of the first; thus bearing testimony to the appreciative reception that the author's work experienced. We are impressed with the mechanical makeup of the book, the beautiful clear type, and the excellent illustrations.

In the therapeutics of skin diseases, the author makes generous use of local remedies, while not entirely denying the possible good to be derived from internal, or constitutional, treatment. Still, most of the remedies that have received much praise as valuable in the internal treatment (p. 73 et seq.) are granted but slight actual value. However, the description of the various skin affections discussed is terse and clear. It, really, often is more in outline than in the form of a detailed discussion. For that reason, we believe that it gains in value for the use of general practitioners.

LEAVITT: "OPERATIONS OF OBSTETRICS"

The Operations of Obstetrics, Embracing the Surgical Procedure and Management of the more serious complications. By Frederick Elmer Leavitt, M. D. Illustrated. St. Louis: C. V. Mosby Company. 1919. Price $6.00.

In his preface, the author says that he presents the subject of obstetrics from the operator's point of view, only enough pathology and physiology being given to give reasons for, and insight into, the vari-

ous procedures described. He hopes and believes that the general practitioner, as well as the specialist in obstetrics, will find such a book useful.

From the standpoint of the physician, the chapter on forceps operations is of the greatest use. If there is any one matter that the average doctor needs light on, it is the indications for, and the management of, forceps operations.

Many men are so afraid of forceps that they will not use them unless forced to; or, if they do, they lose their good judgment and do foolish things. It is the height of folly to wait hour after hour in the hope that nature will somehow perform a miracle, when a simple forceps operation is the one thing required.

The danger of lacerating the cervix, if forceps are applied before complete dilation has occurred, is mentioned by the author. Of course, the forceps then not only embrace the head, but the cervix as well. Pulling does no good and no progress results. However, this accident can be prevented by carefully guiding both blades of the forceps, as they are being introduced, with the finger between head and cervix, and by making a proper examination after the forceps are in place and before traction is practiced.

The use of veratum viride, by the author, in eclampsia, deserves to be noted. It will control the convulsions. He gives it in 10-minim doses every thirty minutes to two hours until the eclamptic seizures have subsided for six hours. Its effect must be carefully watched.

We believe that the doctor can obtain many valuable points from a perusal of this book. It is more particularly of value to the man who intends to specialize in obstetric and gynecologic surgery.

HYMAN: "ELEMENTARY ZOOLOGY"

A Laboratory Manual for Elementary Zoology. By L. H. Hyman. Chicago: University of Chicago Press. 1919. Price $1.50.

This manual was written for the students who take the three-months' course in zoology at the University of Chicago. It is very complete and goes into minutiæ, because of the fact that university classes are large and instructors are few. Where the time is so short, it is not possible, nor desirable, for the student to work out things for himself. The more complete the manual, the more rapid progress he will make. The student must assimilate as much information as the shortness of the time will allow. The frog has been chosen as the animal best adapted for the work to be done. Demonstration of the main facts in anatomy, histology and physiology is easy with the frog. More can be taught with it than with some simpler organism. As a preparation for the study of human physiology, histology and anatomy, this book is ideal. Many facts in the physiology of the human body have been worked out on the lower animals to the benefit of mankind. And, yet, some sentimentalists would deprive us of the power to aid humanity and advance medical science.

It is hard to see how this book could be improved on. It is well written and ideally suited to the needs of the university student. The greatest care is evident in the compilation and arrangement of the subject matter. The University of Chicago Press deserves great credit. Their high standard has been maintained throughout.

GILES: "STERILITY IN WOMEN"

Sterility in Women. By Arthur E. Giles, M. D., B. Sc. Illustrations. London: Oxford University Press. 1919. Price $4.00.

Doctor Giles' interest in the subject of sterility in women is of long duration. The depletion of Britain's manhod by the world war, just ended, made the subject one of vital importance to the profession and to the nation at large. The wives and sweethearts of Britain's best were left desolate. Their progeny were cut off. The perpetuation of the race became a problem of vital importance.

The author divides the treatment of sterility into preventive and actual. Preventive treatment is educational and hygienic. Sexual restraint is just as necessary as honesty, courage, and fair dealing. Promiscuity should be combated in every way. The dangers of syphilis and gonorrhea should be taught. There is too much of a tendency to minimize the dangers and consequences of gonorrhea. The man must be made to understand that it is always possible to communicate gonorrhea to the woman although he may be cured. The

consequences of such a calamity are, sterility and invalidism for her.

Sexual vigor being greater in early life, the author advocates early marriages. This also minimizes the dangers of promiscuous sexual intercourse. Early investigation of fruitless marriages should be instituted by the proper authorities.

"UNITED STATES NAVAL MEDICAL BULLETIN"

United States Naval Medical Bulletin. Published for the Information of the Medical Department of the Service Report on Medical and Surgical Developments of the War. By William Seaman Bainbridge, Lieutenant Commander Medical Corps, United States Naval Reserve Force, Washington Government Printing Office. Special Number. January 1919.

An outstanding feature of this *Bulletin* is the new treatment of wounds, instituted by Major Alexis Carrel, and now called the Carrel-Dakin method. One finds, in looking over the reports by the surgeons and doctors of the different hospitals, of England and France, a cordial appreciation of the Carrel-Dakin method. The success of this method is as much due to the technic of Doctor Carrel as to the remedy itself. The care of the wounds is most important. Any deviation from Doctor Carrel's technic was likely to result in failure.

The wound is kept in continuous contact with an unirritating antiseptic which is a solvent of necrotic tissue. This dying tissue otherwise would keep up the infection in spite of the bactericidal power of the instillation. A most important part of the method is, the control by means of smears taken from various parts of the wound. The surgeon takes these, two hours after instillation has been discontinued. Only when the bacteriologic findings are reduced to a minimum, is the wound closed. If closure is followed by a rise of temperature, the wound is again opened.

Many men have returned home with sight or hearing gone, limbs amputated, physical and mental wrecks of the war. They must be taught a trade or a vocation in order to maintain their mental and physical health as well as their self-respect. The French have taken the lead in vocational training.

At St. Maurice, 30 kilometers from Paris, is an institution for teaching *les mutilés* an occupation or a trade. Dr. Maurice Bourrillon is the director. It is typical of many places that the French have established for the same purpose. At St. Maurice, are 750 patients under treatment for deformities of all kinds and there is provision for the vocational training of 300. Shoemaking, tailoring, leather work, harness making and repairing, machine work, book-keeping, mechanical drawing, farming and many other branches are taught.

The men are paid a franc a day when learning, and, if they have saved their wages, they are given a small bonus when they leave. They are also provided with a full set of tools, costing as much as 300 francs and are all read to start life anew.

These are only some of the interesting topics discussed in this issue of the *Bulletin*, which well repays close study.

PAGE: "LUBRICATION CHART"

Lubrication of the Motor Car Chassis. Instructions for the Systematic Oiling of Important Parts of the Automobile Mechanism. By Victor W. Pagé. New York: The Norman W. Henley Publishing Company. Price 35 cents.

This is a chart about 3 feet square, intended to be nailed or pasted to the garage wall, where it will be available for constant reference. It gives the exact information every car owner wants as to when and where to lubricate his car. It is well worth the 35 cents that it costs.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

Referring to Query 6460, "Regrowth of Nails," page 811, I beg to say that I had a case exactly similar in my early experience, about 22 years ago. I fear, however, that my telling of it will not benefit our Nebraska brother by the time this is printed (unless the editor should send him a copy of this at once). [This was done.—Ed.]

A strong, vigorous man of about 35, who was a foreman in a woodworking factory, attempted to clean the chain of his wife's bicycle. Unfortunately, he turned the back wheel around in such a manner that the chain was moving towards the rear sprocket wheel. Thus, his right index finger had the end pinched off clean, to the extent of about half an inch. About one-eighth of an inch of visible nail was left, and, of course, about another one-eighth of nail hidden under the skin.

He hopped on his own wheel and came to me within half an hour after the accident happened. Immediately, I determined not to amputate anything but to try to save all of the finger that it was possible to conserve. By getting hold of the case so early, I was able to prevent the least degree of microbic infection, by very mild antiseptics. I dressed it frequently, being very careful to have the bandage project a good distance beyond the end of finger, so that the end-granulations could not get in contact with the dressing. In this way, I saved all the granulations, protected the matrix from infection and, in six weeks' time, the patient's right index finger was just as long as it ever had been.

You may well believe that I was astonished at the result, yet, not so very much, after the second week when it became apparent that I could keep the wound clean without killing the delicate granulations at the finger tip. As the nail and matrix kept on growing, it dragged the new tissue with it until the entire finger was restored.

In a previous case, I had restored a finger length on a young baby's hand. The child was just old enough to walk, and had put its little finger part way between a door and the door frame. Either it pushed the door shut with the other hand or the wind blew it shut. The result was, that less than a quarter of an inch of the baby's finger was crushed. It became dry, brown, gangrenous. I maintained it in position in the hope of having it grow on again. But, it was too badly crushed for that. However, the protection afforded by the dead finger allowed the granulations to grow right along. When the dead piece dropped off, the end of finger kept on growing to its normal length. The important thing in both cases was, that enough sound matrix was left to form a new nail. Therefore, my advice is, to use the mildest antiseptics that will keep down sepsis and to protect the new granulations from pressure. That is the whole thing in a nutshell; yet, it tests our patience and surgical skill to do that. In this way, it is easy to avoid doing mutilating amputations. However, the patient must be loyal and sensible and must follow instructions to the letter.

Henry Borst.

Pensacola, Fla.

—

Answer to Query 6454, "Tachycardia." In the October issue of Clinical Medicine, G. S., of Wisconsin, reports the case of a fifty-two-year-old widow who has been suffering from attacks of paroxysmal tachycardia. Toward the end of the first paragraph of his letter, G. S. says: "There is a slight diastolic murmur on the right side of the sternum." With due re-

spect to the erudition of the learned editor, I would respectfully say that the secret of the trouble is in that sentence. The lady is afflicted with mitral stenosis which is the cause of the diastolic murmur. Mitral stenosis is very common in women, especially at the climacteric period. In the treatment of this valvular narrowing, digitalis and strychnine are simply worse than useless. This practice of administering digitalis in every form of cardiac malady, irrespective of the tone of the heart's beating and of the condition of the circulatory compensation, is vicious. Tachycardia *per se* does not indicate digitalis, unless the pulse is very weak and the systolic blood pressure is lower than 125. In this case, the lady is neurotic, the heart is irritable, complicated by mitral stenosis. Strychnine will make it more irritable and pull the narrowing valves tighter. Put the lady on sodium bromide, 5 grains 3 times daily, for the first week, and this may be increased to 10 grains the next week. Use the remedy during the paroxysms, and occasionally alternate it with sodium phosphate, 1 dram in a glass of warm water, one hour before breakfast.

H. S. Jelalian.

Boston, Mass.

Queries

Query 6467.—"Trench Mouth." N. S. C., Iowa, wants us to outline the treatment of socalled trench-mouth, or Vincent's angina.

In Vincent's angina (keratosis pharyngis), we have to do with a subacute inflammation of the tonsils, with slight general symptoms, characterized by ulceration, and regarded as owing to the symbiosis of bacillus fusiformis and a spirillum, the spirocheta denticola.

The bacillus of Vincent is distinguished from the Klebs-Loeffler bacillus by being broader and longer. These frequently are arranged in pairs or in radiating bundles. They form vacuoles, are not stained by the Weigert or Gram test-fluid, but, take up fuchsin or methylene-blue. The spirillum is not stained by the Gram stain and does not take up fuchsin as readily as does the bacillus. It has been grown in pure culture only under anaerobic conditions.

The incubation-period is six or seven days. The onset of the disease is insidious and so little distress is experienced in the throat that attention may be directed to it only by an accompanying glandular enlargement. The disease itself is ushered in with headache, malaise, coated tongue, anorexia, and pains in the back. The temperature rarely exceeds 101° F. and not infrequently remains normal throughout the case. Fetid breath is symptomatic, while slight dysphagia may be complained of.

The local symptoms are typical. On the first day, an easily detachable exudation will be found on one tonsil; on the second, the membrane will be found to rest on an ulcerated surface, which, on the third and fourth, becomes thicker and softer. At this time, the membrane may be expelled or swallowed, leaving a slightly ulcerated surface, on which new membrane forms. In the great majority of cases, only one tonsil is involved; and usually, after from four to ten days, the formation of pseudomembrane ceases, the ulcerated surface becomes clean and heals over. Occasionally relapses are observed.

Complications, either in the glands, kidneys, or serous membranes, are extremely rare, still, a few cases have been reported as ending fatally by extension to the larynx and lungs.

In all these cases, prompt and thorough elimination is essential. From the very earliest moment, the patient should receive full doses of iodized calcium, with calcium sulphide to saturation. Chlorazene-solutions should be applied to the tonsils, the parts then dried and sprayed with solution of Dichloramine-T. Probably no other local treatment will prove as effective. This writer alternates echinacea with calcium sulphide and iodized calcium, and, as soon as the disease-process is controlled, places the patient on the arsenates of iron, quinine, and strychnine, with nuclein.

—

Query 6468.—"Wanted, a Diagnosis." L. B. S., Oregon, presents the case of a farmer's wife, 32 years of age and of

normal weight. Her previous weight was from 140 to 150 pounds. On her mother's side, there was phthisis. She has to micturate, during the night, half to a dozen times. Her respiration is normal. The pulse is depressed and too frequent. Digestion is good; bowels are regular. She has three children and again is pregnant three months.

Present symptoms: "Bothered with jerking pain in limbs, ever since thirteen years old (when she weighed 160 pounds). Has been getting worse all the time since then. When she sits down or walks, it lets up and wears off. Heart palpitates, which is felt in the throat.

"Treatment to date: Have treated her for 'nervousness,' with very little improvement, but, is some better now.

"Urine: 3 pints; acid; pale-straw color; odor, normal; specific gravity, 1015. What would you call this?"

The laboratory report on the urine of this woman does not prove particularly informative; the specific gravity is below normal and the excretion of urea insufficient. The amount of albumin present is very small. There also is a moderate amount of pus, a slight trace of mucin, much squamous epithelium, moderate numbers of colon-bacilli and staphylococci. Bile, also, is present in considerable amount, besides urates.

However, practically all these conditions may obtain during the early months of pregnancy and, considering the woman's condition, the pus, mucin, squamous epithelium, cannot be considered suggestive.

The clinical picture is a little too indistinct to enable us to venture very definite suggestions, and only the most thorough physical examination and prolonged observation of the patient will enable one to account for the jerking pains in her limbs since her thirteenth year—probably the time that menstruation set in. Naturally, one would be inclined to suspect the condition to be of pelvic origin.

The palpitation of the heart and sensations of pulsation in the throat will probably yield to thorough elimination, careful dieting, strong suggestion, and the administration of cactoid and scutellaroid. However, it is quite likely that very little or no benefit will be observed from treatment for the next few months.

In some of these cases, as you are aware, the most remarkable results follow the administration of Goodell's old preparation, which contains, as its essentials, asafetida and valerian. Sumbul may be added with advantage.

It is also more than probable that you might, with infinite advantage, administer an autogenous bacterin.

—

Query 6469.—"Cratægus Oxycantha." C. S. W., New York, asks if we can furnish him with literature on cratægus oxycantha.

We are unable to furnish any literature on cratægus oxycantha. We recall, however, that the action of this drug was very thoroughly discussed in comparatively recent issues of *The Journal of the A. M. A.* and of *Ellingwood's Therapeutist.*

It is unnecessary, of course, to give you the information that cratægus oxycantha is English hawthorn. It grows abundantly in the woods and thickets throughout Europe, central and northern Asia. The fresh bark of the young branches contains a bitter, crystallizable principle, soluble in water, insoluble in ether, and slightly soluble in alcohol.

Cratægus has been very strongly recommended as a remedial agent in various organic and functional heart disorders, including cardiac hypertrophy, with mitral regurgitation from valvular insufficiency, and angina pectoris. As you are aware, spinal hyperemia may be associated with the latter, and both conditions are said to be relieved by the drug.

In this connection, it is well to bear in mind that trimethylamine has been found in cratægus oxycantha and the physiological action of trimethylamine is sedative to the nervous system, hyposthenizant to the arterial system, and a modifier of urea in the urine, diminishing its amount considerably. Related substances are propylamine (not used in medicine), amylamine hydrochlorate (which slows the pulse and diminishes the temperature in man) choline, muscarine and betaine.

Cratægus has of late been recommended in the various somewhat vague heart disturbances of the aged, and the Eclectics consider it indicated in functional organic heart affections associated with pain, dyspnea, præcordial oppression, rapid and feeble heart action. Other writers state that it has been given with excellent results in cardiac hypertrophy, with mitral regurgita-

tion from valvular insufficiency, in valvular deficiency without hypertrophy, in tachycardia, cardiac neuralgia, pericarditis, endocarditis, myocarditis, apoplexy, vertigo, spinal hyperemia and venous stasis.

The Homeopaths consider the subjective symptoms calling for cratægus to be as follows: Rapid, irregular pulse accompanied by palpitation and extreme mental and physical weakness on exertion, in conjunction with painful sensations in the region of the heart, and particularly a painful feeling of pressure below the left clavicle.

The usual dose of the tincture is five drops three or four times daily. In some cases, full doses of the drug give rise to nausea or even vomiting.

—

Query 6470.—"Suspected Cretinism." G. H. F., South Dakota, is treating a child twenty-one months old, who "did very well, relying upon secretion from the mother's breast, until about the seventh month, then ceased to gain much. A test of the milk showed excessive fat and, dieting of mother doing no good, the baby was taken away from the breast. The child would not take bottle, so, gavage was adopted and, under this, the child gained in weight slowly. The first tooth erupted at the age of one year. The child now has seven teeth, but, many portions of the gums are swollen, showing that several more will push through soon. The marked condition is, the lack of strength; the little girl has only for the last two months been able to hold her head up. She has kicked her legs for about eight months. Is not much inclined to take hold of things; can not turn back if placed well over on her side, although she makes some attempt to do so. She has been fed without gavage for the last two months, and will drink milk at times when hungry. The child is very fond of bananas and milk.

"Mental condition: When four months old, the baby always would brighten up when her father came home, but as she grew weaker, she did not respond at all for some time, while for the last seven months she has done so again and recognizes his coming. Asked where papa is, she will look and smile, and will do the same regarding all members of family. She weighs about twenty-one pounds. The patient cannot stand on her feet and, so, is on a par with a child of four or five months. For some time, I considered it a case of rachitis, but, later, decided that it was a case of cretinism. The hair is smooth, and fairly thick. The child keeps her tongue in her mouth; the eyes are normal; she sleeps well at night; does not fuss very much unless hungry. In the early months, there was much mucus in the stools, and they were not normal in color. For a long time there have been no signs of mucus; the stools being yellow, and the odor normal. She has been upon thyroid treatment for some time."

Frankly, we are a little afraid that your diagnosis is correct. Yet, the entire condition here may be due to malnutrition.

As you are aware, the general appearance of the cretin is striking; indeed, so characteristic that, when once seen, it hardly can fail to be recognized, though many of the typical stigmas do not make their appearance until the children are two or three years old, sometimes not until the seventh or eighth year. However, even in infancy the facies is characteristic. The head seems large for the body; the fontanel is open (sometimes until the eighth or tenth year); the forehead is low; the base of the nose broad; the lips are thick and the hair is distinctly coarse, straight and, usually, light-colored. The teeth, in the writer's experience, appear very late, sometimes not a tooth being present at the end of the second year.

These little patients are commonly very sensitive to cold and their body temperature frequently is subnormal. Almost always, the abdomen is protuberant or even pendulous and, almost invariably, these children are obstinately constipated.

The present writer would be inclined to give to your little patient some such preparation of milk and cereals as Nestlé's food and would push the phosphates (calcium, iron, potassium and manganese), in alternation with thyroid. Of course, it is just possible that the latter drug is not indicated. We have not sufficient data to venture a positive opinion on this point. It must be given in very small doses.

May we suggest that you send a picture of the nude child for consideration? What is the family history? Are there any other children? Did the mother have trouble of any kind during her pregnancy? Was delivery natural or instrumental?

Rich in Vitamine Content

MANY laboratory tests have proved beyond question that FLEISCHMANN'S COMPRESSED YEAST possesses the peculiar property of enhancing the nutritive qualities of other foods, either by supplying the Vitamine deficiency of the foods themselves, or by supplying the excess Vitamine requirements of the individual.

A number of these tests were reported with full details in *The American Journal of Physiology* (Vol. XLVIII, No. 2). In these experiments it was shown with white young rats that starvation may result from a plentiful diet of beef, butterfat, casein and starch—if that diet be lacking in the important water-soluble "B" Vitamine. *On the same diet, plus 5 per cent. of* FLEISCHMANN'S COMPRESSED YEAST, *the subjects showed gains as high as 100 per cent. in fourteen days.*

FLEISCHMANN'S COMPRESSED YEAST can be secured in any grocery store. In the familiar tin-foil package it has been used for more than 50 years by housewives throughout the United States and Canada for making bread. Its manufacture has been so developed and refined that absolute purity and uniformity are assured.

The dosage recommended is one cake dissolved in water, milk or fruit juice, before or after each meal. Physicians who experience difficulty in getting FLEISCHMANN'S COMPRESSED YEAST locally, will be supplied by mail by the Fleischmann Company from the nearest large city, in any quantities and on any days specified.

An interesting book on yeast therapy will be sent to physicians on request.

The Fleischmann Company, New York

Chicago, Ill. Seattle, Wash. San Francisco, Cal.

Fleischmann's Compressed Yeast

News Notes Department

Evidence of the value of Pulvoids Natrium Compound as a blood pressure reducing agent multiplies. Many physicians declare that under the administration of this preparation "the worst cases of high blood pressure yield readily", one stating that he finds it "of great value not only in cases of demonstrated high pressure, where they are indicated, but also in cases of vague head disturbances in elderly people, where the difficulty in circulation is not so manifest". A point strongly in favor of this combination of pressure-reducing agents is that it does not irritate the stomach. Is it to be wondered at that physicians buy these pulvoids in lots of 1000 to 5000 at a time? The manufacturers, the Drug Products Co., Inc., 48-52 West 4th Street, New York, offer to send on request a concise summary of "Dietary and Hygienic Regulations for High Blood Pressure". It is worth asking for.

"Light is a great corrective. A thousand wrongs and abuses that are grown in darkness disappear, like owls and bats, before the light of day."—James A. Garfield.

We are fully conscious that, in what we are about to discuss, the metaphor employed in the quotation from President Garfield's speeches does not fit exactly. Yet, it is applicable; so much so that we have decided to let it stand.

To throw light upon a subject, is the first and primary requisite for its true recognition. While, in abstract problems, the light needed is that of discovery and discussion, in physical matters, the physical light generated by the sun and, in modern times by electricity, is the prime desideratum, it being necessary to secure as efficient a source of light, and as strong and clear a light as can be obtained.

It is no longer quite correct, what Bovee said years ago, when he declared that "The light in the world comes principally from two sources—the sun, and the student's lamp." True, both these sources are important. However, the student's lamp has been transformed into the incandescent light and the sun as a light giver has been supplemented by electricity, which is generated with the aid of coal, dug from the earth's deepest and darkest recesses.

The treatment and relief of disease conditions depend first and foremost upon a true recognition of the existing conditions and then

A well-balanced compound of Cascara, Podophyllin, Colocynth and Hyoscyamus.

Pil. Cascara Comp.

(Robins)

Mild, 1 Grain—Strong, 4 Grains.

They normalize peristaltic action instead of inhibiting it, as so many evacuants and cathartics do.

They stimulate a flow of secretions, thus encouraging a normal physiological evacuation.

A trial, the most convincing argument. Send for samples and literature.

* * *

Campetrodin

Campetrodin is a convenient, soothing application for wounds, bruises, sprains, burns, boils, ulcers, etc. Heals rapidly.

Campetrodin—Double Strength, as an inunction, is especially valuable in reducing swollen glands and relieving obstinate deep-seated rheumatic and neuralgic pains.

Samples to Physicians on Request.

A. H. ROBINS COMPANY

RICHMOND, VIRGINIA, U. S. A.

The Quick Evolution
In Oral Hygiene

Do you recognize how quickly, and how widely, Pepsodent has changed teeth-cleaning methods?

Millions of teeth are now brushed with it. And every dentist every day sees some of the results.

The reasons are these:

Pepsodent complies with modern dental requirements in respect to an acid dentifrice. It contains no soap, no other alkali. Thus it stimulates the flow of alkaline saliva, increases its alkalinity, and leaves the mouth in alkaline condition.

Pepsodent contains activated pepsin, the digestant of albumin. Thus it combats the albuminous plaque. It stays where the plaque stays, in the interstices and crevices.

The results are known to millions who have tried it.

Pepsodent as a polishing agent has unique efficiency. We use tricalcic phosphate in finely powdered form. That is the chief tooth constituent.

This is the ideal polisher — the substance of the tooth itself. Its constant use does not injure enamel. It does not scratch — an able scientist has proved that. And natural teeth in our laboratory have been brushed with Pepsodent 200,000 longitudinal strokes.

Pepsodent is the only tooth paste which complies with these requirements. Please test it, if you have not.

Pepsodent PAT. OFF. REG U.S.

The Scientific Dentifrice

Based on Activated Pepsin the Digestant of Albumin

326

THE PEPSODENT COMPANY,
5219 Ludington Bldg., Chicago, Ill.

Please send me, free of charge, one regular 50c size tube of Pepsodent, also literature and formula.

Name .....

Address .....

Enclose card or letterhead

upon the discovery of their causes. For both, manifold painstaking examinations are required that are conducted either on the body cretions. Such an examination must be as of the patient or upon the secretions and excomplete and thorough as it can be made. It is only when an exact and detailed record of all physiological functions is on hand, only when a complete inventory of the patient's assets and liabilities is available, that a just evaluation of the existing anomalies can be made, the trouble recognized, and a plan formulated for their correction.

In the examination of the accessible orifices and cavities of the body, the employment of sunlight, as of artificial light, has long been practiced, usually this light being intensified by means of a reflector attached to the head of the operator. While this works fairly well in the hands of the skilled specialist, the advantages of indirect lighting are decidedly limited. Moreover, they are almost nil in certain cases.

The orifices and cavities of the body, for the exploration of which artificial light is required, are, the mouth with pharynx and larynx (also the trachea and bronchi as well as the esophagus), then the nostrils and the ears, further, the vagina and the rectum. It is evident, therefore, that dentists, laryngologists, otologists, as well as gynecologists and proctologists depend greatly upon the aid that the ingenuity of the manufacturer can afford. Manifestly, the brighter and the more efficient the illumination, the better are the results of examination. If it could be made possible to investigate the various orifices and cavities under direct illumination, the advantages to physician and patient would be immense.

Many forms of lamps for various modes of direct illumination have been devised. Still, few if any have impressed us as forcibly and as favorably—because of their wide possibilities and their multiple uses, as the "Cameron's Electro-Diagnostoset" outfits offered to the dental and medical professions by the American Surgical Specialty Co., 6 E. Lake St., Chicago.

In the apparatus produced by this firm, there is actually not a single examination forgotten in the course of which direct intense illumination may be employed to advantage. The outfits themselves are beautiful and efficient. They are described lucidly and with copious illustrations, in various folders and booklets prepared for your information.

Cleanliness has become associated so much with soap as a means to the end that every cleansing agent offered is viewed and examined in terms of soap, so to speak. Come to think of it, though, the cake of soap that usually is found on the wash bowl, or in its little basin, is rather a messy affair, and so are those jars of green soap; even some of the bottles of liquid soap that are frequently used.

In using soap, whether for washing one's hands or for bathing, or for shaving, it is im-

Does This Mean Anything?

THE DIONOL COMPANY: August 23, 1919.

Samples received. Had immediate use for same in a new case with a large carbuncle on right arm, area of which was over 3 inches in diameter and about one inch deep. Removed crater 1¼ inches under cocaine, then covered it fully with Dionol.

Had patient return next morning. Never saw such rapid results. It is now 3 days and the most excellent improvement I have ever witnessed has followed this treatment.

.....M. D.

Or This?

THE DIONOL COMPANY: August 22, 1919.

First, I had wonderful results in treating the "Flu" last winter with Dionol Treatment.

I was recently called in consultation with Dr.....in a case of facial erysipelas. He gave an unfavorable prognosis and turned the case over to me. I at once put her on to Dionol, externally and internally, and she made a very rapid recovery, temperature reducing from 104 to NORMAL in 3 days' treatment.

The same day I was called in consultation in a case of acute articular rheumatism in a child 7 years old, and had marvelous results in this case with Dionol. I am reporting these cases, as to me, the results obtained were the finest I have ever witnessed under any method of treatment.

Dr.....

DIONOL is the "something different" that secures results, unobtainable by conventional i. e. old fangled methods.

DIONOL is effective in subduing local inflammation whether the latter exists locally or as a part of some general disease.

The acid test of Promise is Performance. **Try DIONOL.**

Send for literature, Case Reports, price lists, etc.

THE DIONOL CO., 864 Woodward Avenue Dept. 20 **DETROIT, MICH.**

Hundreds of Medical Men

use Grape-Nuts on their home tables, for they know it to be pure, wholesome and exceedingly nourishing.

The best parts of wheat and malted barley, including their mineral elements, are used in making

Grape-Nuts

Twenty hours baking, after a mixing process that starts the breaking down of the starch in the grains, produces the rich, sweet, nut-like flavor.

These facts explain the ease with which it is digested, and why Grape-Nuts is so good a food for elderly people, young folks and invalids, as well as athletes and all clear-brained workers.

"There's a Reason" for Grape-Nuts

Samples of **Grape-Nuts**, **Instant Postum**, and **Post Toasties** for personal and clinical examination, will be sent on request to any physician who has not received them.

Postum Cereal Co., Battle Creek, Mich.

portant to have an article free from excess of alkali, so as not to injure the skin. Very often, the use of ordinary toilet soap, for instance, or of shaving soaps, while removing the dirt well enough, and making it possible for the razor to clean off the stubble, leaves a drawn, sore feeling on the skin, showing that the soap employed possessed undesirable qualities.

All this and many other disadvantages have been overcome in a "cleansing powder" that was recently brought to our attention. It is not soap, nor does it come in cakes, or in solution; it is a powder said to be a modern development from that old fashioned, yet reliable hand cleanser, corn meal. Thoro, as it is called, combines in itself the detergent properties of soap, the mildly abrasive action of fine cornmeal, and the emollient effects of pure, soothing oils.

Some day, I am going to write a study of soap. At the present time, I just want to say that I have rarely used anything with greater satisfaction for washing my hands, and I never found a "shaving soap" that leaves a smoother, cleaner, more pleasant sensation on the face after the use of the razor, than Thoro.

Thoro is a splendid cleansing agent for the surgeon in the operating room. It is likewise excellently adapted for the home, and will even manage to clean up little Johnnie's grubby hands after he comes in from play. Look at the advertisement of the Thoro Corporation, 225 W. Huron St., Chicago, Ill., in this issue, Doctor, and better investigate Thoro on your own hook. Take advantage of their generous offer to send a full size (not a sample) package of Thoro Cleanser for a free trial. It will pay you.

Albany, Ky., December 9, 1919.

Huston Brothers Co.,
30 E. Randolph,
Chicago, Ill.

Gentlemen:—I have received the Baird's outfit I ordered from you all O. K. and I will say, I, as well as my patient, am perfectly delighted with it. The lady I ordered it for has been bedfast for three years. Now she is up and about and says she feels like a new woman. This is enough to make one feel good. I have just located in this town and this will be some feather in my cap. Thanking you, I beg to remain,

Very truly yours,
Dr. Sam C. Long.

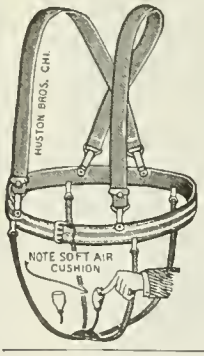
The recent epidemic of "Flu" should have impressed upon us the absolute necessity for developing our therapeutics on more scientific and practical lines. We need increased knowledge of drug action in pathological conditions. Improvements in laboratory facilities and in technique justify our hope that such must come. In spite of the tendency to employ biological agents therapeutically, many medical minds cling to the belief that there exists undeveloped value in the older chemetherapy that needs but the touch of human art to develop its complete virtue.

I believe that this will eventually come to pass. Within the past two years I have been

START THE NEW YEAR RIGHT

GET THE LATEST EQUIPMENT

The instruments described in this ad are guaranteed to be meritorious and to increase greatly the physicians' convenience and efficiency.



UTERINE DISPLACEMENTS

easily corrected by

Bairds Air Cushion

Price to physicians is $5.00 complete or $3.00 without the shoulder attachments. Money back if you are dissatisfied.

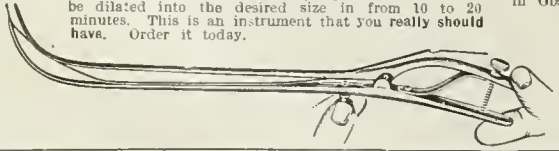
The Obstetrical "Shoe Horn"

Anatomically correct as regards size and shape.

In cases where the foetal head engages against the Symphysis pubes instead of emerging directly toward the birth canal, this instrument will be found worth its weight in gold. The head of the foetus may be readily deflected toward the canal. Eliminates hours of suffering and danger. Price $5.00.

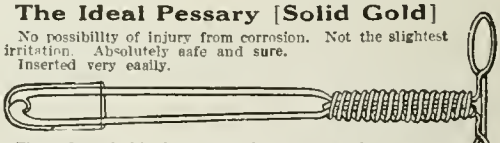
Ask Any Physician

who has used the new Johnson Kollman dilator, and he will tell you that it is a very meritorious instrument. This very simple and satisfactory Urethral Dilator and Catheter combined positively will do the work of the $50 Kollman instrument. It costs you only $12.50. Can be used without danger of lacerating and will pass through very tight strictures. Can be dilated into the desired size in from 10 to 20 minutes. This is an instrument that you really should have. Order it today.



The Ideal Pessary [Solid Gold]

No possibility of injury from corrosion. Not the slightest irritation. Absolutely safe and sure. Inserted very easily.



The value of this instrument is very great in cases of dysmenorrhoea and similar conditions; also wherever there is a catarrhal condition or where drainage is required; also in cases of sterility. Price to patient $25—to physician $7.50 (¾-in. base) or $8.00 (1-in. base).

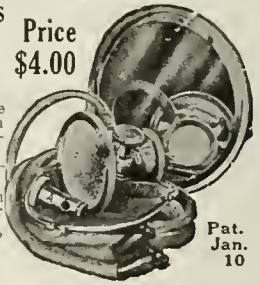
POSITIVE DIAGNOSIS

HUSTON'S AKOUOPHONE

The Only Differential Stethoscope

Slips into your pocket like a watch. Its cost is less than your fee for just one diagnosis.

Price $4.00



Pat. Jan. 10

Doctor: Pre-War Price Holds

BECAUSE—Our Physician Patrons steadily increase their mail order demand.

"Neverslip is a Definite Aid" in Obstetric Technique.

Trade Mark

2 Indestructible Jars 30 "Cases" $1. Postpaid

Huston Bros. Co. 30 E. Randolph St. CHICAGO, ILL.

THE 1919 PRACTICAL MEDICINE SERIES

$2.50 $2.50 $1.75 $1.50 $1.75 $1.75 $1.50 $1.50

EIGHT VOLUMES

A Complete Digest and Critique of the Recent Development in all Departments of Medicine and Surgery

Volumes I to V Now Ready

Others in Active Preparation

With these books on his desk, the physician may feel confident that he has the last available word in every branch of his profession.

THE PRACTICAL MEDICINE SERIES offers, under the editorship of the distinguished specialists whose names are shown on the illustration, a complete record of all that is being accomplished in the wide range of recent medicine and surgery. Systematic in arrangement, one volume of convenient size devoted to each subject or group of subjects, every page of every volume direct and to the point—up to date, well illustrated, each volume indexed, the 1919 series will prove a mine of the latest knowledge on all subjects. By it the physician makes the world's progress his own; he has immediate access to every advance and stride of contemporary medicine, available for instant reference or for reading—perfectly meeting his requirements in every phase of his professional work.

The 1919 Series The importance of these books to the physician who wishes to keep fully abreast of the times can scarcely be overestimated. At a moderate cost he obtains in permanent text-book form, not the experience of one man, but the best work of thousands of investigators, the master minds of present-day medicine. Developed through eighteen years of continuous and successful publication, the prestige and esteem in which this series is held by the profession attest its value and, as we believe, indispensable service to the progressive man.

Terms The subscription price for the eight volumes is **$12.00**, payable in advance or in convenient installments, carriage charges prepaid. **See Coupon.** Individual volumes are sold at the prices quoted in consecutive order under the cut.

The Year Book Publishers

Chicago, Ill.

Volume I on Approval

Conditional Order Sign and mail to the Publishers MI

The Year Book Publishers,
304 S. Dearborn St., Chicago.

Gentlemen:—You may send me for examination and approval Volume I of the 1919 Practical Medicine Series. If I do not return it in ten days, you may enter my subscription for the full series of eight volumes, at $12.00, payable pro rata as the books are delivered.

Name .....

Address .....

DOCTOR RESULTS Count in

FRACTURES

Of the Hip, Thigh, Leg and Ankle Joint. They are easily set and treated in or out of bed with the Ambulatory Pneumatic Splint.

Your treatment with this up-to-date adjustable screw extension air cushioned splint, would secure good bone union, comfort, strength and health of patient in the least time and also give you the best possible results and remuneration for your services.

That's what you both want. Do it now. **To Order:** State name, address, sex of patient, fracture, right or left limb, and length from heel to perineum.

Rental outfit complete, fitted and tagged ready to apply with full directions, delivered to any part of the United States for two months or less is $35 which includes a cash discount of $5 to the physician on each rental splint on its removal and return to us.

Illustrated folder and order measurement blanks mailed on request.

Patented

AMBULATORY PNEUMATIC SPLINT CO.

30 (C) E. Randolph St.
CHICAGO

Makers of Complete Lines of Surgical Orthopedic Appliances.

BORCHERDT'S MALT SOUP-EXTRACT

A STANDARD AMERICAN PRODUCT

(Free From Alcohol)

For Preparing

MALT SOUP

Of recognized value in the treatment of infants suffering from marasmus, atrophy and malnutrition.

Typical Malt Soup results are obtained by using **BORCHERDT'S MALT SOUP-EXTRACT,** usual weight increase, marked change in character of stools and generally a satisfactory improvement.

BORCHERDT'S MALT SOUP-EXTRACT is composed solely of Malt Extract and Potassium Carbonate in their correct proportion, according to the original Malt Soup Formula.

Samples and Literature on Request

BORCHERDT MALT EXTRACT CO.

221 N. Lincoln St. CHICAGO, LL

1920 MODEL

Lighter and Smaller
Non-Breakable **Easy to Carry**

After trying out two of the latest Stethoscopes advertised, Dr. George Starr White, of Los Angeles, Calif., says in a letter to Dr. Scott: "I tell you, Doctor, there is only one Stethoscope that I have ever found yet that meets my requirements and that will meet the requirements of any one who makes a study of Stethoscopic work, and that is

Scott's Non-Roaring Stethoscope
IDEAL FOR BLOOD PRESSURE

Price, $4.50 Postpaid.

Scott Mfg. Co. Adel, Iowa

Office Equipment

When you refurnish your office or add new appliances you will naturally want the best, the latest and most up-to-date.

The Allison Line of Tables, Chairs, Cabinets and Physicians' Office Accessories is always abreast of the times.

Style 8

Write for latest Bulletins showing just the equipment you will need. You never make a mistake with any Allison Furniture.

Style 2155

W. D. Allison Co.
Ala and Sahm Sts., Indianapolis, Ind.
Agencies in All Principal Cities

HORMOTONE

in

Menstrual and Menopausal Disorders

A large proportion of the patients treated in a physiscian's practice are women suffering with some derangement of menstrual or generative function. These disorders are due in a large measure to diminished or disturbed function of the glands of internal secretion. Ovarian extracts have been freely used in the treatment of these disorders but it is now realized that pluriglandular therapy in the form of Hormotone gives more immediate and more lasting results.

In women at the menopause who have a tendency to high blood pressure Hormotone Without Post-Pituitary (but containing anterior pituitary) should be used instead of Hormotone.

Pluriglandular therapy is both logical and effective and has the endorsement of high authorities.

Hormotone gives the physician the best opportunity to prove its worth.

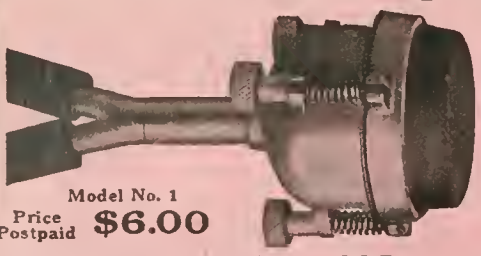
Dose of either preparation: One or two tablets three times daily before meals.

Literature on Request

G. W. CARNRICK CO.

21 Sullivan Street **New York, N. Y.**

Dr. Pollard's High Tension Stethoscope



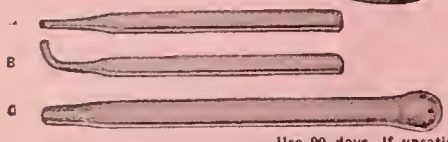
Model No. 1
Price Postpaid **$6.00**

A 'scope with which you can hear the heart sounds through an overcoat, coat and vest, and with which you can easily hear the fetal heart sound. The regulation binaurals are used on this stethoscope.

Try it a week, if not satisfied return and your money will be cheerfully refunded.

JOHN D. POLLARD, M.D., **2755 Jackson Blvd., Chicago, Ill.**

IODIN MEDICATION EXTERNALLY APPLIED, by the IODOFUMER



Price $10.00 Postpaid

VOLATILIZES IODIN CRYSTALS BY HEAT. SUBLIMED IODIN FORCED ON OR INTO DISEASED TISSUE.

Absolutely painless. Potent antiseptic to external wounds, ulcers and all infectious dermatoses.
READILY ABSORBED for treatment of goitre, lymphadenitis, fibroid phthisis, systemic syphilis, mucous patches, chronic rheumatism, arthritis, tonsillitis, otitis media, and all conditions requiring efficient iodin medication. Does not irritate the stomach.
The report of the Chicago University, Physiology department, shows positive absorption from the skin, also the physiological change in the thyroid gland after seven local applications of iodin fumes which increased the iodin contents of the thyroid gland 14 times.

Please read our money back guarantee and send us your order.

Use 90 days, if unsatisfactory we refund purchase price.

THE IODOFUME CO., Dept. B, 5 N. Wabash Ave., Chicago, Ill.

He Who Tries—*LEARNS*

the practical value of indicated medicaments in the treatment of

Leucorrhoea	**Menorrhagia**	**Mild Prolapse**
Cervical Erosion	**Endometritis**	**Abortion Sepsis**
Vaginal Discharges	**Pruritus**	**Eczema, etc.**

MICAJAH'S WAFERS

are astringent, antiseptic, antiphlogistic, styptic, deoderant, soothing and healing. Easily used. Pronounced in action. Prolonged in effect. Ethically advertised. Thirty years' increasing use by practical physicians

MICAJAH & CO., Warren, Pa.
Send samples of Wafers, literature and booklet, "Diagnostic Aids."
.....M. D.
.....
(B) .....

A Test Will Convince

MICAJAH & CO.
Warren Pa.

MATERIALS, Money, Methods and Men—the four essentials in every large undertaking. Yet how futile all these are without *ideals!*

McKesson & Robbins, Inc.

recognize the ideals of quality and service as the dominant features in every action, and that is why their products are symbolized by this trade mark

McK & R

Drugs—Chemicals—Pharmaceuticals

McKESSON & ROBBINS, Inc.

Manufacturing Chemists

Established 1833 NEW YORK

LOESER'S INTRAVENOUS SOLUTIONS

INTRAVENOUS SOLUTIONS of U. S. P. and standard salts accurately prepared so as to be acceptable to the blood stream and avoid sbock and alarming reactions.

Ethically presented, the contents definitely stated on the label, without ambiguous statements, coloring matter or unnecessary ingredients to disguise the actual contents.

These sterile stable solutions, intended for intravenous injection exclusively, are contained in hermetically sealed insoluble glass ampoules.

	Volumes and Contents	Indications	Box 6 Ampoules
IRON AND ARSENIC	5 c.c Iron Cacodylate, 64 mg. (1 grain).	The most positive and prompt method of raising blood count and hemoglobin contents. Anemias, Malaria, Pellagra, Psoriasis, Neurasthenia, Syphills, Skin Diseases, Tuberculosis Chlorosis, Pericarditis.	$3.00
ARSENIC AND MERCURY	5 c.c. Sodium Dimethylarsenate (Cacodylate) U.S.P., 2 gms. (31 grains); Mercury Iodide, U.S.P., 5 mg. (1-12 grain). Also in 1.5 gm. and .7 gm. dosea.	Syphilis, Tropical Fevers	$12.00
SODIUM IODIDE	20 c.c. Sodium Iodide U.S.P., 2 gms. (31 grains).	Asthma, Chronic Arthritis, Syphilis, Nephritis, Tuberculosis, Glandular Involvements, Goitre, Bronchitis, Pneumonia.	$6.00
SALICYLATE AND IODIDE	20 c.c. Sodium Salicylate U.S.P., 1 gm. (15 grains); Sodium Iodide U.S.P., 1 gm. (15 grains).	Grippe, Influenza, Acute and Subacute Arthritis, Tonsilitis, and All Streptococci Infections.	$6.00
SODIUM SALICYLATE	5 c.c. Sodium Salicylate U.S.P., 1 gm. (15 grains).	Tonsilitis, All Streptococci Infections, Acute Arthritis, etc.	$1.00
MERCURY BICHLORIDE	5 c.c. Mercury Bichloride, 16 mgs. (¼ grain).	Syphilis, Erysipelas, Influenza, Gonorrheal Rheumatism.	$1.00
MERCURY OXYCYANIDE	5 c.c. Mercury Oxycyanide, 8 mgs. (⅛ grain).	Syphilis, etc.	$1.00
QUININE DIHYDROCHLORIDE	5 c.c. Quinine Dihydrochloride U.S.P., .5 gms. (7½ grains).	Malaria, etc.	$1.50
HEXAMETHYLENAMINE	5 c.c. Hexamethyl U.S.P. Urotropin, Formin, 1.5 gm. (24 grains).	Pyelitis, Cystitis, Colon Infections, Toxemias of Tuberculosis, Pelvic Infections, Pneumonia, Meningitis, etc.	$6.00
CALCIUM IODIDE	20 c.c. Calcium Iodide, 6 gm. (10 grains).	Tuberculosis, Intestinal Disturbances and whenever Calcium is Indicated.	$6.00

TECHNIC: Do not dilute this solution. Break ampoule, draw into all-glass syringe and attach a 23 to 25 gauge hypo needle. Use tourniquet or have patient grasp the arm with his free hand until the veins at the bend of the elbow stand out prominently; run the needle into the vein quickly. Blood usually comes back into syringe back of needle or can be drawn back to be certain that needle is in the vein; release pressure, then inject slowly.

Send for complete list of Intravenous Solutions, Reprints and Clinical Data.

NEW YORK INTRAVENOUS LABORATORY

110 East 23rd Street **New York City**

Producing ethical intravenous solutions for the Medical Profession exclusively.

Help Yourself

Prescribe JUNKET universally and help yourself in your work. Being milk in ideal form, prepared for sure and easy digestion, it will prove your most reliable diet prescription.

Junket
MADE *with* MILK

When all else fails, JUNKET succeeds. A perfect food for infants. And patients always like its delicacy.

Send for treatise "Junket in Dietetics" and free samples of Junket Tablets.

Chr. Hansen's Laboratory
John St., Little Falls, N. Y.
Canadian Factory, Toronto, Ont.

Ambumatic Washable Abdominal SUPPORTERS

Patented

Never disappoint. They do their work just right. Made front and back. Buckled or laced. Cannot slip up or down. Are adjustable for up-lift or as a binder to the lower, middle or upper part of abdomen, in a comfortable corrective way that is alike satisfying to patient and surgeon.

Made according to suggestions of the late Dr. John B. Murphy and of his assistant Dr. Jas. M. Neff, during the time that they were associated in surgical work at the Mercy Hospital, Chicago.

Each Ambumatic is scientific in design, efficient in results, and is built to wear and wash for a long time. Prescribe it once, thereafter it will command your admiration and patronage.

Illustrated folder, measurement order blanks, samples of materials, price, etc., mailed free on request.

Ambulatory Pneumatic Splint Mfg. Co.
30 (C) E. Randolph St.
CHICAGO
Makers of Complete Lines of Surgical Orthopedic Appliances

PROTECT YOUR PATIENTS

Against

Colds
Influenza
Pneumonia

USE SHERMAN'S NO. 38

Write for Literature

MANUFACTURER OF BACTERIAL VACCINES

G. H. SHERMAN, M.D.
Detroit, Mich. U.S.A.

ANATOMICAL CHARTS

The American FROHSE Life Size Series
By Max Brodel, Prof. of Med. Drawing Johns Hopkins Med. School

Seventeen charts, life-size and larger, contained in seven large plates, 42x66 inches. Lithographed in true-to-life colors—anatomically accurate in all details—absolutely reliable — complete in all essentials—graphic and distinct. Conveniently mounted in dust-proof spring roller case.

Used by successful, progressive Physicians and Surgeons, Medical Colleges, Hospitals, and Nurse Training Schools.

Are you equipped? If not, send for descriptive booklet today.

A. J. NYSTROM & CO.
Publishers
2249-53 Calumet Ave.
CHICAGO, ILL.

M 120
COUPON
Gentlemen: Send me your booklet M10 describing the American Frohse Life-size Anatomical Charts.
Name .....
Address .....

Here Are Some of

THE BEST BACTERINS
FOR FALL AND WINTER USE

Abbott Bacterins are Reliable and Effective

Abbott Ampules

The best means of presenting single doses of Abbott bacterins. The suspensions are carefully measured into each ampule, protected from contamination and immediately sealed. Sterility assured. You are safe with Abbott's.

List No. 1117

M. Catarrhalis-Combined Bacterin
For the treatment and prophylaxis of recurrent colds, grip, bronchitis, catarrh, influenza, etc.

No. 952

Pneumococcus-Combined Bacterin
For the treatment of mixed infections caused by pneumococci, streptococci, and staphylococci, such as pneumonia, empyema, pleurisy, broncho-pneumonia, bronchitis, and the secondary infection in tuberculosis.

No. 1195

Influenza-Pneumococcus Combined
For prophylaxis against epidemic influenza and the pneumonic complications of influenza.

No. 1115

Pertussis-Combined Bacterin
B. Pertussis 400 million, B. Influenza 200 million, M. Catarrhalis 200 million, Pneumococci 200 million, Streptococci 200 million, Staphylococcus mixed albus and aureus 800 million.

No. 1116

Streptococcus- Rheumaticus Combined ....
Prepared from strains of organisms secured from cases of rheumatism, for which disease it is specifically indicated.

No. 1114

B. Coli-Combined Bacterin
Valuable in cystitis, colitis, pyelitis, cholecystitis, rectal and ischiosectal abscesses, appendicitis, acute nephritis, and other conditions caused by B. Coli.

The Best Bulk Bacterin Container

The Abbott bulk bacterin container is the only one which is permanently sealed so that the cork cannot become loosened in handling. A perforated metal cover is crimped down over the lip of the bottle holding the cork fast and the contents of the container inviolate. It presents the best means of giving divided dosages of bacterins and for economical buying. It saves money, is a great convenience, and is proof against contamination. All Abbott bacterins are supplied in Abbott Ampules and in Abbott bulk bacterin containers. At your druggist, or direct.

Write for "Bacterins and Their Uses," sending us your druggists' name.

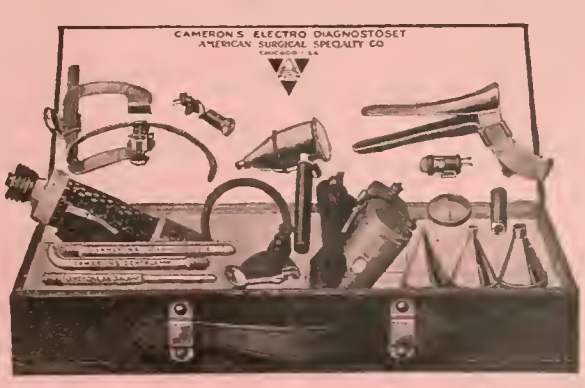
THE ABBOTT LABORATORIES

Home Office and Laboratories, Dept. 95, Chicago, Ill.

New York Seattle San Francisco Los Angeles Toronto Bombay

SEND FOR 10-DAY TRIAL OFFER

COOL
SANITARY
DURABLE
COMPACT



CAMERON'S
ELECTRO-
DIAGNOS-
TOSET

IMPROVED INSTRUMENTATION—PERFECT ILLUMINATION

Here, Doctor, is a combination of electrically lighted instruments that will furnish automatic control and perfect illumination for practically all orificial examinations, treatments and operations. These instruments are original in design and represent the latest developments of hospital experience. They permit of a simplified technique, avoiding interference from assistants. This equipment furnishes an abundant white light which is never in the way of the operator, doing away with the shadows and uncertainties of daylight and indirect illumination. The ordinary flashlight bulbs, which may be obtained anywhere, may be used for replacements. The equipment is SAFE, SANITARY, SIMPLE, DURABLE and COMPACT.

Cameron's
Diagnostolite.

Cameron's
Vaginalite.

1. **THE DIAGNOSTOLITE.** A small, white, sanitary Opalite tube into which is fused a lens for concentrating light rays (the searchlight principle). Useful for all oral examinations, in deep abdominal wounds, transillumination of nasal regions, maxillary and frontal sinuses, etc. The detachable laryngoscopic mirror is for diagnosis of post-nasal region, vocal cords, etc. The double vacuum construction (like a Thermos bottle) assures coolness, is clean and prevents electric shock.

2. **THE VAGINALITE**—A Vaginal speculum electrically lighted. Gives abundant evenly diffused light throughout entire vaginal area. Light is never in way of operator. In Uterine Hemorrhage, Tamponments, Curettements, Urethral Treatments, etc., it does away with uncertainties and is a positive aid to better results. This instrument is entirely free from springs and set screws, is of medium size, is self-retaining, and is adaptable for an illuminated Simm's modification.

4. **THE ELECTRO-TONSILASSISTANT** for oral surgery and treatments. The automatic tongue depressor holds tongue well forward and upward while lamp positioned in the palatal arch (out of the field of operation) furnishes direct, unfailing light throughout the entire mouth and throat. Mouth gag is automatically adjustable and cannot slip. In tonsillectomy, adenectomy, etc., it gives operator maximum of room, plenty of light, and two free hands. Light cannot be dimmed by blood or mucus, or accidentally broken. All parts readily sterilized.

5. **THE DIAGNOSTOSCOPE** for aural examinations. Gives a clear, magnified view of Tympanum without shadows or reflections. Includes both operating and diagnostic lenses, three ear specula and pneumatic bulb for aspiration and massage.

Particular attention is directed to the shape of the aural specula, which are designed to project the light beyond the apex of the attachments and in this way clearly illuminate the ear drum.

Cameron's
Electro-Tonsilassistant.

Cameron's
Diagnostoscope.

For the Office, Hospital or Home. Complete Literature on Request

Your Money Back If Not Satisfied

Cameron's Electro-Diagnostoset is highly recommended by the editor of The American Journal of Clinical Medicine. We will ship the complete outfit to you prepaid on receipt of your check and you may use it in your practice for ten days. If you are not entirely satisfied, return the set and your money will be promptly refunded. Do this today.

AMERICAN SURGICAL SPECIALTY CO.

6 E. Lake St., Chicago, Ill.

AMERICAN SURGICAL SPECIALTY CO.,
CM 6 East Lake Street, Chicago.

Send me for 10-day trial as per your offer, Cameron's complete Electro-Diagnostoset, for which I am enclosing check. If not entirely satisfactory, set may be returned at your expense and you are to return check enclosed.

Cameron's Electro-Diagnostoset with Potential Reductor Unit Battery and extra Cord $60.00

This outfit includes the Diagnostolite, the Vaginalite, the Antralamp, the Electro-Tonsilassistant, the Diagnostoscope and the Dentalamp.

Name .....

Street No. .....

City ..... CM

FLAVINE

TRADE MARK

ACRIFLAVINE GH
PROFLAVINE GH

LICENSED BY
CHEMICAL FOUNDATION, INC.

HEYL LABORATORIES, INC.

MANUFACTURING AND
CONSULTING CHEMISTS

Medicinal Dyes Diagnostic Reagents
Microscopic Stains Organic Chemicals

437 BARRETTO ST., NEW YORK

In Prescribing For

DIABETES

REMEMBER

LISTERS
PREPARED CASEIN
DIABETIC
FLOUR

It Makes Strictly Starch-free

DIABETIC

Bread, Cookies, Muffins, Biscuits, Noodles, Pancakes, Dumplings, Spice Cake, Doughnuts, French Toast, Fluff Cakes

AND MANY OTHER DISHES THAT ARE

Filling, Satisfying, Palatable, Appetizing, Nutritious, Attractive, Body-Building, SUGAR-REDUCING, Quickly Assimilated

THIS Flour is SELF-RISING and unusually convenient. Packed in small, individual boxes—one for each day. Thirty of these boxes—a month's supply, come packed in one case. Price $4.85 direct. Full directions for making a wide variety of foods in each package.

LISTER BROS., Inc.
405 Lexington Avenue, New York City

SEND NO MONEY

ULTIMA No. 3 SINUSTAT

"He Got More Than He Expected"

"Before securing the Sinustat No. 3, I was advised that it was only a small machine without enough force to do any good. The advice was not sound. My No. 3 has all the force I need. Can send a current through any part of the body and have never used all its force at any one time. I am pleased with it. It is a good investment. You have done the profession a good turn in putting these machines on the market."

Just let us prove to you that the Ultima No. 3 Sinustat is invaluable in constipation, other gastro-intestinal ailments, for exciting reflexes (Abram's) and for treatment of under-developed, flabby muscular tissue in any part of the body. Military hospital experience has demonstrated the effectiveness of sinusoidalization.

Ultima Physical Appliance Co., 136 W. Lake St., Chicago.

Gentlemen: You may send me C. O. D. $15.00 on 30 days trial one Ultima No. 3 Sinustat. I agree to pay the balance in six monthly payments of $10.00 each; or to return the apparatus within 30 days and you are to refund the $15.00 paid.

Signed .....
Address .....
My Bank Is .....

ULTIMA PHYSICAL APPLIANCE CO.
136 W. Lake St. Chicago, Ill.

Books of Medical Interest

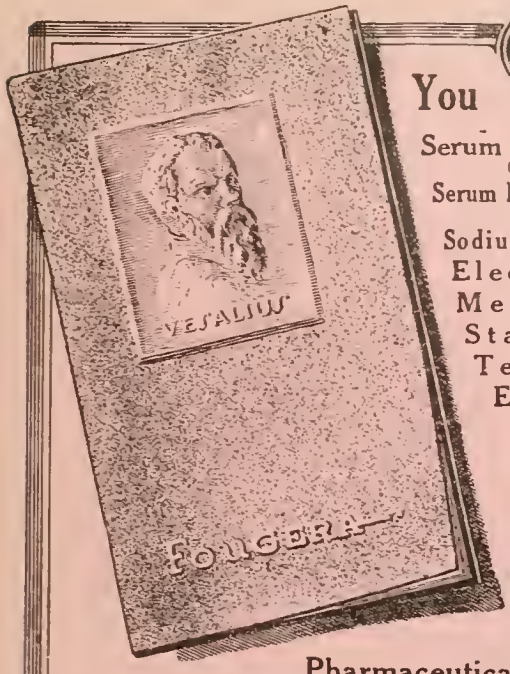
Food Poisoning. *By E. O. Jordan.* $1.00 net, postpaid $1.10. Discusses extent of food poisoning, articles of food most commonly connected with food poisoning, prevention of food poisoning.

The Control of Hunger in Health and Disease. *By Anton Julius Carlson.* $2.50 net, postpaid, $2.65. Professor Carlson discusses the effects of hunger in men and in animals. He tells how hunger may be controlled and how and when starvation becomes beneficial to the human system.

Heredity and Eugenics. *By Coulter, Castle, East, Tower and Davenport,* $2.50 net, postpaid $2.70. This volume is intended to present the recent developments of knowledge in reference to evolution, heredity, and eugenics, and related subjects. It presents the latest conclusions in a popular and extremely interesting manner.

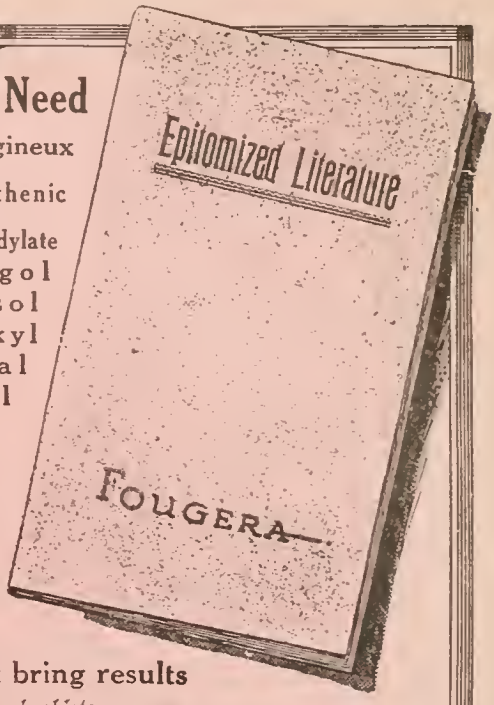
Problems of Fertilization. *By Frank R. Lillie.* $1.75 net, postpaid $1.90. As the problem of fertilization deals with the union of the male and the female sex elements, which forms the beginning of each individual's life history, it has important bearings upon the problems of heredity. It also has close relations to several other fundamental biological problems.

The University of Chicago Press
5896 Ellis Ave. Chicago, Illinois



You Need

Serum Ferrugineux
(Fraisse)
Serum Neurasthenic
Fraisse)
Sodium Cacodylate
Electrargol
Metharsol
Stannoxyl
Tetrasal
Enesol



Pharmaceuticals that bring results

Send for the above booklets

E. FOUGERA & CO., Inc. Estab. 1849 **90-92 Beekman St., New York**

TRIAD AMPOULE Rx

GALEN AMPOULES

SUBCUTANEOUS, INTRAMUSCULAR and INTRAVENOUS

Cacodylates (Sodium, Iron), Mercury (Gray Oil, Salicylate, etc.), Nuclein, Glycerophosphate, Sodium Iodide, Quinine, Iron Citrate, Digitalin, Miscellaneous

SINGLE, COMBINATION and TRIAD FORMULAS

CACODYLATES

TRIAD No. 1
(Galen)

A GALEN AMPOULE CONTAINING IRON, SODIUM CACODYLATE AND STRYCHNINE CACODYLATE

℞
Strychnine Cacodylate Gr. 1-65
Iron Cacodylate Gr. 1-6
Sodium Cacodylate Gr. 1-2
Sodium Glycerophosphate Gr. 1½

Sig.: Inject contents of one ampoule subcutaneously in Anemia, Anorexia, Neuroses, Exhaustion, Heart and Nerve Depression following Influenza, Pneumonia, Tuberculosis and acute infections. Also in chronic states.

DOES NOT CAUSE IRRITATION

6 ampoules..... 75c 25 ampoules.....$2.50

QUININE

TRIAD No. 16
(Galen)

A GALEN AMPOULE CONTAINING QUININE, ANTIPYRINE AND CAFFEINE

℞
Quinine Grs. 3½
Antipyrine Grs. 2½
Caffeine Grs. ½

Sig.: Inject contents of one ampoule intramuscularly. Antipyrine in conjunction with Quinine has little or no depressing effects upon the heart. Is unusually efficacious in the treatment of infectious with temperature. Is especially valuable in Malaria and acute colds. Repeat for effect. Should be alternated with and followed by Triad No. 1.

MUST BE INJECTED INTRAMUSCULARLY

6 ampoules..... $1.25 25 ampoules..... $4.00

GALEN AMPOULE PRICE LIST CONTAINING OVER SIXTY FORMULAS SENT FREE

GALEN LABORATORIES, SAN FRANCISCO

When the "Flu" Returns,

there will be frequent calls for an effective, assimilable and pleasant form of creosote. The same is true of bronchitis and of the broncho-pulmonary sequellae of pneumonia.

Morrhuol Creosote (Chapoteaut)

combines the medicinal virtues of an alcoholic extract of cod liver oil with the therapeutic action of pure beech wood creosote in small gelatine capsules, pleasant to take, convenient to carry, active in effect. Each capsule contains 3 minims of Morrhuol and 1 minim beech wood creosote.

In bottles of 80 capsules

Endorsed and employed by *Germain, Sée, Gay, Dujardin-Beaumetz, Sommerbrodt*
Employed by thousands of American physicians

"FOUGERA"—a periodical devoted to treatment, on request. Write for it.

Dr. Ph. Chappelle
Paris, France

E. FOUGERA & CO., Inc.
New York City

Syrup

BALSAMEA

for

Pneumonia

and other respiratory diseases.

Regarded by many prominent Clinicians as

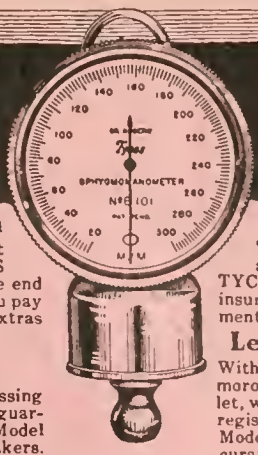
THE RESPIRATORY SPECIFIC

Sample sent on request

THE BALSAMEA CO.

2590 Folsom St.,
SAN FRANCISCO, CALIF.

RENT THIS TYCOS NINE MONTHS THEN IT'S YOURS



Easy Rental Purchase Plan

By our easy rental purchase plan, after a first payment of only $2.50 we will rent this TYCOS to you for nine months at $2.50 a month, at the end of which time it is your absolute property. You pay only the cash price—with no interest and no extras—and have

Nine Full Months To Pay

Just dignified credit. No red tape or embarassing questions. You take no risk. We absolutely guarantee thia genuine Dr. Rogers' New 1919 Model TYCOS and it is also fully guaranteed by the makers.

Standard Of The World

There is only one standard of the world—reliable—dependable—accurate—and that is the TYCOS, which has been adopted and is used by all insurance companies, the United States Government and medical authorities.

Leather Case and Booklet Free

With each TYCOS we give you free a handsome morocco leather case and a 44-page instruction booklet, which tells exactly how to use it. The TYCOS registers both systolic and diastolic pressures. Modern scientific diagnosis demands the aid of an accurate instrument for determining blood pressure.

Dr. Rogers' Genuine 1919 Model Self-verifying Sphygmomanometer

Cash Price Everywhere $25 But we will send it to you upon receipt of only $2.50 and allow you ten days free trial. If then you wish to keep it, simply pay the balance, $22.50, in nine small monthly payments of $2.50, and the instrument is yours. You cannot buy it for less eowywhere else. You cannot buy it on anch easy terms except by tha Aloe Easy Rental Purchase Plan.

Ten Days Free Trial Just enclose first month's rent—$2.50 and we will ship the TYCOS at once. Try it thoroughly for ten days. Give it every test you can. If you are willing to part with it, send it back at our expense and get your money. If pleased, then pay only $2.50 a month for 9 months. SEND FOR YOUR TYCOS TODAY. Do it NOW. Let it PROVE it's usefulnrss tn you. It is so easy to own that you'll never miss the money.

A. S. ALOE COMPANY, 559 Olive Street, ST. LOUIS, MO.

Gonosan
Kava Santal Riedel

To **alleviate pain,** to **promote diuresis** and to **protect** the membrane of the urethra, especially **the posterior portion**—these are the important objects of the treatment of acute cases of Gonorrhea.

The entire urinary tract should be influenced by means of proper internal medication. Local injections alone will not be sufficient.

This is the rationale of Gonosan.

RIEDEL & CO., Inc.

35 West 32nd Street **NEW YORK**

Consider the STERLING Pain Relieving LAMP

Doctor, you know about the value of sunlight as a therapeutic agent. You know about the pure white rays, the violet rays and the ruby screen.

The Sterling Therapeutic Lamp combines all of these agents in an economical, scientific and efficient manner.

You will find this lamp a practice builder. Its effect is soothing and analgesic. Its rays are germicidal.

In rheumatism, skin and scalp diseases, in nervous conditions and a score of other symptoms and diseases the Sterling Pain Relieving Lamp is a godsend.

SEND FOR OUR FREE ILLUSTRATED BOOKLET—CLIP AND MAIL THIS COUPON TODAY.

The Sterling Pain Relieving Lamp Co.
Dept. 5422, 546 Garfield Ave., Chicago.

Please send me without cost or obligation your Free Illustrated Booklet describing the Sterling Therapeutic Lamp and its uses.

Dr. .....

Street No .....

City .....

How Military Surgeons Reclaim Spinal Cripples

The reconstruction of maimed and crippled soldiers of the great war is calling forth the best efforts of the great surgeons and physicians of the entire civilized world. Results have been obtained that a few years ago would have been considered impossible. Not only will the crippled soldiers benefit by these new methods of reconstruction but thousands of the unfortunate deformed and maimed in all walks of life will find relief. Each discovery should be carefully recorded and the information made available for the benefit of all sufferers.

Corp. Frank Fernie

Of particular interest to physicians having in their care sufferers from spinal deformities caused by accident, is the authenticated case of Corporal Frank Fernie, a veteran of ha First Canadian Contingent. The full history of this case, which has attracted wide attention, will be sent to any reader of this magazine on request.

Seven ribs fractured, two lower vertebrae bent and twisted one inch out of position, paralysis in both legs and arms were the injuries sustained by Corporal Fernie when the explosion of a German shell killed eight of his companions in an artillery excavation.

Old methods of treatment were tried by the army surgeons without success. Encased in a plaster cast for five months, Corporal Fernie was finally transferred to Canada, where the surgeons at the Royal Victoria Hospital (Montreal) substituted a rigid leather brace for the plaster cast, but the patient continued helpless until he was supplied with a Philo-Burt-Spinal Appliance, the results from which were a revelation to his medical advisers.

Within one year from the date of his injury Corporal Fernie was working every day in the shipbuilding department of the Imperial Munitions Board at Ottawa, at which time he wrote us:

> **"The army medical authorities are not only going to refund to me the amount I paid for my Philo Burt Spinal Appliance, but they have placed your name on file for future reference."**

We will be glad to send a complete case record to any physician or surgeon without charge.

It is our policy to co-operate directly with local physicians and surgeons, or if preferred, we assume full responsibility for results from the Philo Burt method for treating every kind of spinal deformity resulting from accident or disease, which in 18 years has been used with success in more than 30,000 cases.

The Philo Burt Spinal Appliance is sold on 30 days' trial at our risk, and is made to individual measurements in every case. Address, giving name of your physician.

PHILO BURT COMPANY

13-H Odd Fellows Building
JAMESTOWN, NEW YORK

DÉBRIDEMENT AND DIOXOGEN.*

Among the surgical lessons of the war one of the most noteworthy has been the recognition of the importance of the mechanical cleansing of wounds. The French call this débridement, but it cannot be better described than as mechanical antisepsis.

In studying the action of peroxide of hydrogen as a wound-cleanser, particularly a peroxide as potent as Dioxogen, it would seem that its efficiency in decreasing the bacterial count in an infected wound must depend in no little degree on the physical processes which attend the liberation of oxygen. In other words, when Dioxogen is introduced into a wound, it bubbles and foams, thus mechanically detaching fragments of dead and dying tissue, and in this way cleansing the wound surfaces much more effectually than is possible by irrigation.

Is it not a rational conclusion, therefore, that the efficiency of Dioxogen in the treatment of wounds is due not only to its disinfecting power, but quite as much to its unique action in mechanically freeing wound surfaces from the foreign material that if allowed to remain would essentially handicap and delay the healing process?

The use of Dioxogen means debridement and disinfection - mechanical cleansing and effective antisepsis - with the further advantage of absolute freedom from toxic or irritating action. No other antiseptic at the service of the medical profession makes possible such satisfactory application of the latest teachings in regard to wound treatment.

* For further information in respect to Dioxogen, address The Oakland Chemical Co., 10 Astor Place, New York City.

impressed by a development in pharmacology that bids fair to revolutionize our art of therapeutics. I refer to the intravenous injection of many of our old and proven remedies by the use of a technique no more complicated than used for an ordinary hypodermic injection. Any physician who is able to introduce a fine needle into a prominent vein in the bend of the elbow can now administer intravenous medication without the least misgivings or doubt. I do not hesitate to declare that apparently many of the older remedies are better tolerated when given intravenously than by the mouth.

The author treated a series of thirty cases with an intravenous solution containing Sodium Iodide and Sodium Salicylate, one grain each. He demonstrates that Rational Therapeutics implies knowledge of the responses of the defensive forces of the body to the remedies employed.

Send for complete reprint with results of experiments.

New York Intravenous Laboratory,
110 E. 23rd St., New York City.

Abstracted from the Medical Council, July, 1919, "The Future of Therapeutics."

Anatomical charts, providing they are executed truthfully, have a far wider field than that in their use for teaching purpose only, or for popular lectures. For the practicing physician, especially the one doing surgery, but also for the internist, a rapid refreshing of the memory often is of great value. For this reason, we believe that the American Frohse Life Size Series of anatomical charts, published by A. J. Nystrom & Co., 2249 Calumet Ave., Chicago, Ill., are of wide and more general usefulness than is commonly expected of them. Being fastened to the walls in such a manner as to be out of the way when not in use, these charts really should find a place in every physician's office or study, and should be consulted frequently and closely. The expense is inconsiderable if it is compared with the accruing benefit.

Iodine has been in great favor for many years, as is evidenced in part by the multiplicity of preparations on the market. Especially has the problem of a soluble iodine occupied pharmaceutical chemists for years and various preparations of this kind are on the market. We are impressed with several preparations of soluble iodine offered by The Iodum-Miller Co., 533 Ridge Bldg., Kansas City, Mo.

At no time in the past has it been so necessary for the physician, and particularly for the general practitioner, to keep himself informed of new acquisitions in medical knowledge, of modification of the old views and ideas, and of the improvements that are constantly being made in the methods for recognizing and for treating disease, as it is at the present day. If any medical man desired to possess and to study all original contributions to medical literature, he would require a building like a Carnegie Library, and would have to spend his entire time at his reading desk. Even to buy only the most im-

CALCREOSE

Tuberculosis

Help your patients with chronic pulmonary tuberculosis to recover and stay "well" by prescribing creosote and calcium compounds.

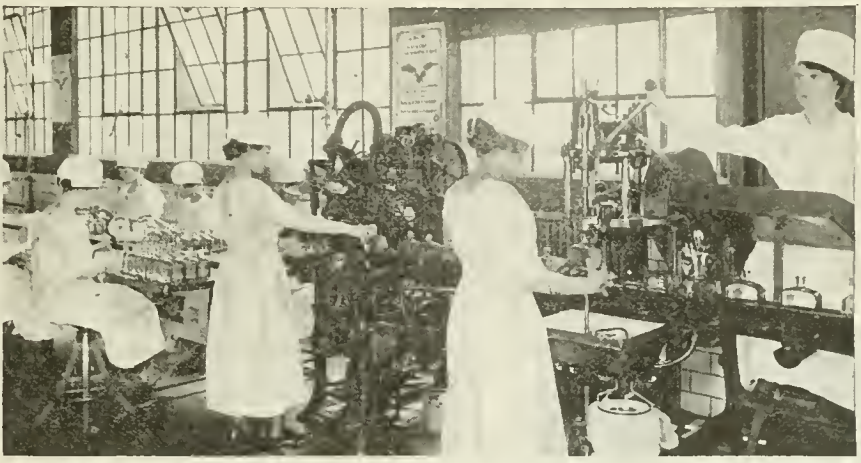
CREOSOTE in the more advanced stage or in the presence of fever, and **CALCIUM** for use throughout, are in the opinion of Dr. S. Solis-Cohen secondary but necessary agents in the successful management of the great mass of cases of *chronic pulmonary tuberculosis.*

Patients do not object to creosote in the form of **CALCREOSE** because **CALCREOSE** does not disturb digestion; in fact it stimulates the appetite, favors digestion, promotes nutrition—acting as a tonic.

Write for further details and samples.

THE MALTBIE CHEMICAL CO.

Newark, New Jersey



Finest Technical Equipment

Nujol is manufactured under a system of rigid supervision and inspection that absolutely insures the quality and purity of this product.

A corps of expert chemists follow the product through, and tests are made during the various processes of manufacture. Thus the uniform quality of Nujol is maintained.

The makers of Nujol command the finest grade of raw material the world produces. In addition Nujol is made under the most modern sanitary conditions in bright, clean, well-aired laboratories.

The Nujol Laboratories of the Standard Oil Co. (New Jersey) have made every viscosity from a water-like fluid to a jelly and have proved the correctness of the viscosity of Nujol by careful clinical test and observation.

Nujol
For Constipation

Samples and authoritative literature dealing with the general and special uses of Nujol will be sent gratis. See coupon below.

Nujol Laboratories, Standard Oil Co. (New Jersey)
50 Broadway, New York.

Please send me sample of Nujol, also booklet.

□ "In General Practice" □ "In Women and Children"
□ "A Surgical Assistant"

Name .....

Address .....

portant textbooks and special treatises would call upon financial resources such as are at the command of relatively few men. It is, therefore, of great service that a number of publications are available in which the progress made during the most recent years and months is described briefly and concisely. In this manner the tedious and time-absorbing work of literary study is eased, and the physician is informed of the practical application to be based upon cumbersome and detailed studies. "The Practical Medicine Series," issued by The Year Book Publishers of Chicago, for several years, is what its name implies, a collection of books dealing with practical medicine, and informing the physician and surgeon, as well as the specialist, of what they need to know in their work. The selection of original publications to be abstracted is made under the editorial care of some of the leading men in this country. The abstracts are concise and yet clear. The physician who has acquired "the habit" of consulting and studying this "Practical Medicine Series" is certain to keep in the vanguard of medical progress.

The "Practical Medicine Series" is published in eight volumes a year, at the price of $10.00 for the series. Further details can be seen in the advertisement.

For many years physicians have been familiar with the preparations of McKesson & Robbins, whose products are invariably of standard quality

Burdick Deep Therapy Lamp

The New Daylight Therapy

Quick relief of pain. Stimulation to vital function. Relieves inflammation and aids in clearing up infectious conditions. Soothes irritated nerves.

Favors healing of most superficial skin lesions.

$10.00 WILL BRING IT TO YOU

Send for Bulletin No. 7 containing full descriptions of various types and photographically setting forth the latest methods of leading American Operators. Our proposition is liberal and makes it possible for you to secure this new development in light Therapy now.

BURDICK CABINET CO.

102 Atlantic Ave. MILTON, WIS.

Rx *Campho-Phenique Antiseptics*

PHYSICIANS—

Try these Prescriptions on your next case and note the result. ***Campho-Phenique Liquid*** has been tried and tested by many Physicians with excellent results

SUGGESTIONS.

Catarrh (Nasal)

℞ Campho-Phénique Liquid.....℥ i.
Olive Oil [pure].....℥ iv.
M. Sig. Use as a spray.

Erysipelas.

℞ Campho-Phénique Liquid.....℥ ii.
Olive Oil [pure].....℥ iii.
M. Sig. Pencil over surface.

Frost Bite

℞ Campho-Phénique Liquid.
Olive Oil [pure].....aa ℥ iv
M. Sig. Pencil over surface.

Diphtheritic Sore Throat.

℞ Campho-Phénique Liquid.....℥ ii.
Olive Oil [pure].....℥ ii.
M. Sig. Use as a spray.

CAMPHO-PHENIQUE LIQUID, Small Size 30c, Large Size $1.00
CAMPHO-PHENIQUE POWDER, Small Size 30c, Large Size 75
Physician's Samples and Literature on request.

CAMPHO-PHENIQUE COMPANY
SAINT LOUIS, MISSOURI. - - - - U. S. A.

Why Club a Cough

or attempt to overcome bronchial irritation and inflammation by outraging the stomach with nauseous expectorants or "Knock down" narcotics? Oil taken into the stomach, reflexly stimulates bronchial secretion, relieves congestion, soothes cough, does not disturb digestion, nor mask other symptoms.

Terraline
(Petroleum Perification)

is medicinally pure petroleum oil, palatable, without action upon digestion and prompt in its influence upon the respiratory tract. It soothes cough and subdues irritation.

TERRALINE is also mildly laxative, when used as an intestinal lubricant. It is an ideal vehicle for many medicinal agents. It is intended for physicians prescribing only, and for the convenience of the physician is put up Plain, with Heroin, or with Creosotes.

In spite of the use of arrhenic compounds authorities advise the "follow up" treatment with mercury and often iodide in luetic conditions.

PIL MIXED TREATMENT (CHICHESTER) is a perfectly balanced, dependable formula containing mercury and KI, well tolerated, active and efficient.

Sold in bottles only—never in bulk. Price $1.00 per bottle.

Hillside Chemical Company
Newburgh, N. Y., U. S. A.

and of great merit. Ordinarily, physicians are not enthusiastic about seeing advertisements of chemical manufacturers in popular journals, because so often it has happened that these manufacturers carry water on both shoulders, making approved remedies for the use of physicians and "dope for quackery" for sale over the drug counter. When the articles that are made for direct public and popular consumption can not be included among drugs proper but constitute such articles as tooth powder, toilet water, perfumery, etc., the question gains a different aspect and it can not be denied that a manufacturing concern that is equipped to satisfy the stringent and severe demands necessitated by the preparation of drugs to be prescribed by physicians, must be excellently fitted to produce those other things in which purity of product and correctness of composition are equally of importance. It is for this reason that we are interested in the advertising campaign of McKesson & Robbins for the purpose of popularizing their Calox Tooth Powder, Albolene Cold Cream, and many other similar preparations that are properly sold by the druggist. We hope that this campaign will be very successful.

One of the greatest trials that a patient with a fractured leg is called upon to undergo is the confinement in bed when he feels so well in everything but the limb that is temporarily out of commission. The invention of a splint that could be applied to a broken leg in such a manner that the patient is enabled to be up and around, with the assurance that the fracture is well set and remains so, and that it will heal safely, even though the patient is exercising, was an ingenious one and deserves the thanks not only of the unfortunate patients but also of the attending physicians. The Ambulatory Pneumatic Splint Manufacturing Co., 30 E. Randolph St., undoubtedly has hastened the recovery of many patients with fractured limbs for the very reason that it made rest in bed unnecessary. This company also handles washable abdominal supporters and orthopedic appliances of many kinds.

In these days of winter colds and coughs, and so forth, Calcidin (Abbott) again is proving its claims to consideration since it forms one of

THIALION

Thousands of physicians are prescribing it in all cases characterized by the presence of URIC ACID. Are YOU? Its value has been fully demonstrated. Send for literature and samples to

VASS CHEMICAL CO.
DANBURY, CONN.

The Management of an Infant's Diet

Malnutrition, Marasmus or Atrophy

Mellin's Food
4 level tablespoonfuls
Skimmed Milk
8 fluidounces . .
Water
8 fluidounces . .

Analysis:

Fat	.49
Protein . . .	2.28
Carbohydrates. .	6.59
Salts	.58
Water . . .	90.06
	100.00

The principal carbohydrate in Mellin's Food is maltose, which seems to be particularly well adapted in the feeding of poorly nourished infants. Marked benefit may be expected by beginning with the above formula and gradually increasing the Mellin's Food until a gain in weight is observed. Relatively large amounts of Mellin's Food may be given, as maltose is immediately available nutrition. The limit of assimilation for maltose is much higher than other sugars, and the reason for increasing this energy-giving carbohydrate is the minimum amount of fat in the diet made necessary from the well-known inability of marasmic infants to digest enough fat to satisfy their nutritive needs.

MELLIN'S FOOD COMPANY, BOSTON, MASS.

The nutrient value of Virol illustrated in a series of cases, particulars of which have been supplied by medical men.

CASE No. 2

THE value of VIROL is well shown in this case. This child weighed 17 lbs. at 40 weeks and is in perfect health.

AFTER VIROL

SHOWING the handicap the baby had to overcome. This picture was taken at age 7 weeks—weight 2 lbs. 13 ozs., every food having failed and not able to digest milk itself.

BEFORE VIROL

Virol is valuable food for invalids and children. It is a preparation composed of Red Marrow, extracted from ox rib and calves' bones by C. P. glycerine; refined Marrow-Fat and Beef; highly dlastasic Malt Extract; Eggs; Lemon Syrup and soluble Phosphates.

In glass jars; 50c, $1.00 and $2.00

Liberal samples and interesting literature sent to physicians on request.

VIROL is concentrated food, prepared with scientific skill from most nutritious substances. The proportions are carefully adjusted to diet formulae laid down by up-to-date physiologists.

Virol

Used in more than 2000 hospitals, sanatoria, and infant clinics in Great Britain

Sole Agents for U. S.

ETNA CHEMICAL COMPANY, 59 Bank St., New York

the most distinctive and most efficient remedies that can be employed in the case of pulmonary and bronchial congestion of pharyngeal irritation and similar conditions characterized as "cold." Not only that, but, wherever the alterative properties of iodine are required, Calcidin presents a form of the drug that is easily assimilated and decidedly delivers the goods.

As a matter of fact, the day is long since past when Calcidin (Abbott) required an introduction. It is not presented as something new and unknown, it is simply recalled to your mind, Doctor, as a drug of distinction that you have long known and that should be on your shelves constantly; nota bene: being used constantly and, therefore, renewed frequently.

Here is a preparation of creosote that ought to be fairly unobjectionable as to taste, at least as unobjectionable as any creosote preparation can be made. We refer to Firolyptol with Kreosote, advertised on another page of this issue, by The Tilden Company, New Lebanon, N. Y., and containing eucalyptol, cotton-seed oil and creosote in a vehicle of firwein. This preparation carries with it several drugs that are of great use in wasting diseases like, for instance, tuberculosis, and in convalescents from acute febrile maladies. The formula appeals to us very much and we have no hesitation in encouraging its use.

The "chain-store" idea evidently has been applied to certain lines connected intimately with the medical practice. At least we have heard for some time of the National Pathological Laboratories, Inc., being situated in several cities of the union. There is one laboratory in Chicago (5 S. Wabash Ave.), one in New York, (18 East 41st St.), one in Brooklyn, (Chamber of Commerce Bldg.) and one in St. Louis (University Club Bldg.). Each component institution being in charge of a highly trained and competent medical director, physicians in the nearby districts have at their disposal efficient laboratory facilities.

In addition to the usual laboratory work, like Wassermann test, pathological examinations, and the preparation of autogenous vaccines, the National Pathological Laboratories, Inc., also prepare Anti-Rabic Virus (Harris) and Mercurial

Show Motion Pictures ANYWHERE!

A new, practical, compact, fool-proof, portable projection machine makes it possible now to show motion pictures anywhere. You can show standard films—the same as those shown in real theaters, wherever there's an electric light socket. Anybody can run the machine. No experience is necessary.

with AMERICAN PROJECTOSCOPE

You can sell your product by means of motion pictures. Films showing the manufacture and actual operation of your goods can be shown by your salesmen. "Seeing is believing." Your salesmen will be able to increase their orders when able to "show" a prospect. The entire machine, motor driven, weighs but 25 pounds —hand-driven, 20 pounds. It carries like a suitcase. Write for descriptive literature and prices.

AMERICAN PROJECTING COMPANY
6227 Broadway, Dept. 1912 CHICAGO, ILLINOIS

Prevent Needless Fatigue

Walking with hard leather heels on still harder floors, stairways and sidewalks is bound sooner or later, to cause excessive nerve tire and fatigue.

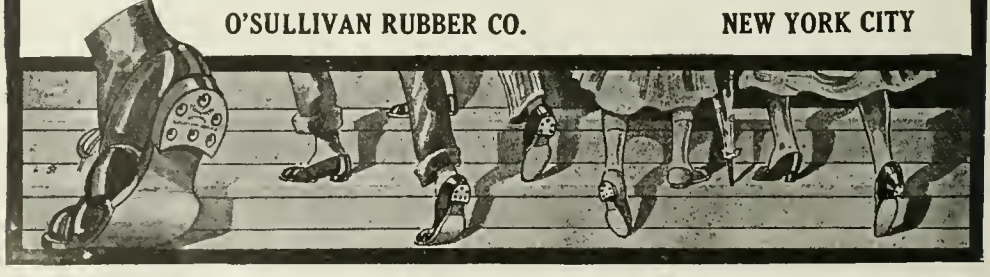
O'Sullivan's **HEELS**

through their remarkable resiliency and shock-absorbing properties, substantially remove the harsh impact and jar from each of the 8,000 or more steps the average individual takes daily, and thus prevent much nerve tire and exhaustion.

Medical men have come to appreciate the great hygienic value of O'Sullivan's Heels, for personal experience has shown them conclusively how much these high grade rubber heels contribute to physical comfort, well-being and efficiency.

O'Sullivan's Heels assure maximum resiliency and durability, and are guaranteed to wear twice as long as ordinary rubber heels.

O'SULLIVAN RUBBER CO. **NEW YORK CITY**



Stanolind

Reg. U. S. Pat. Off.

Surgical Wax

For Injuries to the Skin

While it is more generally used in the treatment of burns, it also is employed successfully in the treatment of all injuries to the skin, where, from whatever cause an area has been denuded—or where skin is tender and inflamed—varicose ulcers, granulating wounds of the skin, etc.

Surgeons will find it useful to seal wounds after operations instead of collodion dressings.

It maintains the uniform temperature necessary to promote rapid cell growth.

It accommodates itself readily to surface irregularities, without breaking.

Stanolind Petrolatum

A New, Highly Refined Product

Vastly superior in color to any other petrolatum heretofore offered.

The Standard Oil Company of Indiana guarantees, without qualification, that no purer, no finer, no more carefully prepared petrolatum can be made.

Stanolind Petrolatum is manufactured in five grades, differing one from the other in color only.

Each color, however, has a definite and fixed place in the requirements of the medical profession.

"Superla White' Stanolind Petrolatum.
"Ivory White" Stanolind Petrolatum.
"Onyx" Stanolind Petrolatum.
"Topaz" Stanolind Petrolatum.
"Amber" Stanolind Petrolatum.

The Standard Oil Company, because of its comprehensive facilities, is enabled to sell Stanolind Petrolatum at unusually low prices.

STANDARD OIL COMPANY

(Indiana)

Manufacturers of Medicinal Products from Petroleum

910 S. Michigan Avenue Chicago, U. S. A.

767

(Gray) Oil for clinical use. We believe that the National Pathological Laboratories merit the patronage of practicing physicians fully.

The fact that there are constantly new stethoscopes being offered for the consideration of physicians argues that there are a great many difficulties attending upon the construction of these instruments of precision. While each physician has a favorite stethoscope that he employs with preference, it sometimes is inconvenient that good results can be had only if the bell of the stethoscope is applied over the bare skin; even a thin undershirt causing a decided alteration in the sounds of respiration and heart beat. Dr. John D. Pollard, 2755 Jackson Blvd., Chicago, Ill., offers a high-tension stethoscope with which, he claims, the heart sounds can be heard through overcoat, coat and vest. This is a large assertion and one that has to be proved. However, we have no doubt that Doctor Pollard is quite ready to show you. Anyway, if you are not satisfied, Doctor, he promises to refund your money. Consequently, you are nothing out by inspecting and trying this latest of all stethoscopes for which so much is promised and which indubitably will need all of us for proving out in practice.

With the taking over, by the Federal Trade Commission, of certain German-owned patents and the manufacture under Federal license of related remedies by American manufacturers, there is now no longer any difficulty in securing the drug formerly known as "novocaine" and offered to the medical, dental and veterinary professions under the official name of Procaine. Procaine (Abbott) is American novocaine, manufactured by the Federal Trade Commission for purpose of local anesthesia, wherever this is to be employed. Procaine (Abbott) has proved itself in rigid tests both in the laboratory and in practice as an A-1 local anesthetic. It is made right and it works right. If you have not used this meritorious product, Doctor, communicate with the manufacturers and get next.

POND'S EXTRACT

Freely applying Pond's Extract with vigorous rubbing to the affected area often gives marked relief from pain and soreness. A still better plan is to use a flannel compress saturated with Pond's Extract; place this over the lumbar muscles and pass a hot flat-iron over it until it becomes dry. This often proves a pain-relieving measure of great efficacy.

LUMBAGO

POND'S EXTRACT CO.
New York and London

Important Facts Concerning the Prostate

1. The greater number of conditions of **Neurasthenia** in the male undoubtedly are due to a derangement of the genito-urinary functions and most frequently to **prostatic disease.**
2. Eighty per cent of all cases of enlargement of the prostatic gland are not due to chronic hypertrophy or fibrous enlargement, but to **chronic congestion and irritation.**
3. Practically every case of congestive enlargement is curable if properly treated.
4. Cutting operations on the prostate are never called for in congestive enlargement, and are always dangerous in elderly men.
5. In chronic hypertrophy, the urinary and bladder symptoms are constant. In congestive enlargement there are good days and bad days, and the symptoms vary.
6. Nine physicians out of ten, whose experience in these cases has not been very large, class all cases of enlargement of the prostate as "Chronic Hypertrophy," and incurable without an operation.

That this is an entirely erroneous viewpoint has been proved times without number by over two thousand physicians who have learned to rely upon **SUPPOS. PROSTANS** as their Sheet Anchor in all functional prostatic affections.

TRIAL IS PROOF—JUDGE FOR YOURSELF!

This Coupon Means Success and Money Saved as Well. Fill it Out. Send Today.

REGENT DRUG COMPANY,
Etiot Station, Detroit, Mich.

☐ I enclose $1.00, send me one box (of 15) Suppos. Prostans (price $1.50), also book "On the Treatment of Prostatic Diseases and Impotence"—free.

☐ I enclose $5.00, send me six boxes of Suppos. Prostans (worth $9.00), also the above book and "Successful Prostatic Therapy"—free.

Formula on Every Box.

Name .....

Address .....

Glykeron and Glyco-Heroin

ARE SYNONYMOUS APPELLATIONS AND ARE NOW KNOWN AS SUCH TO ALL DISPENSING PHARMACISTS

THESE designations may now be used interchangeably by the physician when prescribing the preparation originally known only as Glyco-Heroin (Smith).

As a safeguard against having worthless imitations of the preparation dispensed, it is suggested that the physician use the name

GLYKERON

which is non-descriptive and more distinctive, when prescribing GLYCO-HEROIN (SMITH) for **Cough, Asthma, Phthisis, Pneumonia, Bronchitis, Laryngitis, Whooping-Cough and kindred affections of the respiratory system.**

DOSE—The adult dose is one teaspoonful every two hours, or at longer intervals as the individual case requires.

For children of ten years or more, the dose is from one-quarter to one-half teaspoonful; for children of three years or more, five to ten drops.

The composition of GLYCO-HEROIN (SMITH) has not been modified in the slightest degree.

MARTIN H. SMITH COMPANY

New York, U. S. A.

Rum Has Gone—Dope Is Going

While the use of morphine or other opium derivative is legitimate in the hands of a careful and conscientious physician, he will, whenever and wherever possible, guard against the possibility of drug addiction by the use of

HYOS-SCO-PIPER

an effective and safe succedaneum for morphine, codeine, heroin (up to ¼ or ½ grain), or

a means whereby the amount of morphine is required can be reduced to a safe yet effective minimum.

Advertised and sold only to the medical profession.

HYOS-SCO-PIPER requires no Harrison blank—contains no opium—produces no dangerous or disagreeable effects.

Send for Literature, Case Reports, Directions and Price List

COMBS CHEMICAL CO., 980-990 Wolfram St. CHICAGO, ILL.

The STORM BINDER and ABDOMINAL SUPPORTER

PATENTED

Adapted to Use of Men, Women and Children and Babies

FOR HIGH AND LOW OPERATIONS, PTOSES, HERNIA, OBESITY, PREGNANCY, FLOATING KIDNEY, RELAXED SACRO-ILIAC ARTICULATIONS, PERTUSSIS, etc.

Sacro-Iliac Belt

No Whalebone. No Rubber Elastic. Washable as Underwear.

Inguinal Hernia Modification

Send for new folder and testimonials of physicians. General mail orders filled at Philadelphia only—within twenty-four hours

KATHERINE L. STORM, M. D., 1541 Diamond St., PHILADELPHIA

To Put a Brake on the Heart

IN

EXOPHTHALMIC GOITRE, CARDIAC NEUROSES, TACHYCARDIA

is a rational and necessary therapeutic measure

ANASARCIN TABLETS

inhibit the cardiac fibres of the pneumogastric and stimulate the cardiac motor ganglia so that systole is increased, diastole prolonged and cardiac rhythm regulated and controlled. Non-cumulative, non-depressant, non-irritant. Anasarcin Tablets also exert powerful diuretic action, increasing both fluid and solid urinary output in dropsy, ascites or anasarca.

Sample and literature to physicians on request.

THE ANASARCIN CHEMICAL CO., Winchester, Tenn.

INTRAVENOUS **LUVEIN** PRODUCTS

Dependable, stable, non-oxidizable, sterile solutions for rapid, direct, controllable medication

Luvein "Arsans" Plain and with Iron
for anaemias, chlorosis, amenorrhoea, cachexias, neuroses, convalescences, impotence, tuberculosis (with Creosophite) and in skin diseases where arsenic would be indicated. No. 1—Mild; No. 2—Medium, tolerance or try-out dose; No. 3—Strong; especially indicated in syphilis.

Luvein "Guaiaco"
For bronchial and laryngeal affections, acute rheumatism, gout, tonsilitis and as a rapidly-acting antipyretic.

Luvein Tri-Iods
For absorbing inflammatory and diseased deposits (orchitis, goitre, etc.), for septic infections and some skin diseases.

Luvein "Creosophite"
For Tuberculosis, influenza and acute fevers, bronchitis and catarrhal affections. (Also Special Creosophite), for Influenza and Pneumonia.

Luvein "Calcifer"
For calcium deficiency, hemorrhages (lungs, stomach, nose, etc.) Hayfever, the cachexias, urticaria, bronchorrhoeal asthma.

Luvein "Mercurans," "Hexacol," "4-Chlorides," etc.

In Ampules, ready for instant intravenous use. Highly scientific and original.

Used successfully by well-known physicians. Daily clinics at the Laboratory or by appointment.

Intravenous preparations made to order for members of the profession.

THE LUVEIN LABORATORIES
Incorporated
287 West 70th Street
NEW YORK
Phone: Columbus 3269

Sign and return this coupon, or enclose with your card, and receive descriptive literature, with brochure on "Modern Methods in Medication."

Name .....

Address .....

BUSINESS OPPORTUNITIES

Have you something to sell or exchange?
Do you want a location or an assistant?
Are you looking for new opportunities?

Use and read this column. Ads. eight cents a word. Remittance should accompany order. Address Business Opportunity Column, The American Journal of Clinical Medicine, 4753 Ravenswood Ave., Chicago.

ASSISTANTS WANTED—SALARIED ASSISTANTS wanted for Hospitals and Sanitoriums, also for general, mining, and contract practice; 1,000 appointments already secured for our clients. Medical practices bought and sold in all sections. For particulars write to "The Medical Echo." Lynn, Mass.

PHYSICIANS ATTENTION—NOW IS THE TIME to order your new Labels and Stationery. Write for samples and prices to Consolidated Ptg. & Pub. Co., 4017 N. Robey Street, Chicago.

MORPHINE AND ALL DRUG AND LIQUOR AD-dictions. Treat these cases at home privately yourself. No pain, no vomiting, no hypodermics, not dangerous, positive results. Enclose stamp for particulars. Chas. H. Quayle, M. D., No. 7 Park Place, Madison, Ohio.

DRUG AND LIQUOR HABITS—SANITARIUM established eighteen years. No suffering, no danger, close medical care, good nursing. Pleasant surroundings, quick and absolutely satisfactory results. Ralph Sanitarium, 529 Highland Avenue, Kansas City, Kansas.

BOOK BARGAIN—THREE DOLLARS FOR ONE—the works of Dr. Geo. F. Butler, teaching sex knowledge for the boy and girl—in line with the thought of the day. Three books for One Dollar—"Every Boy's Book," "Every Girl's Book," and "Exploits of a Physician Detective." Terms cash with order. Money back if not satisfied. THE AMERICAN JOURNAL OF CLINICAL MEDICINE, Chicago, Ill.

POEMS THE DOCTOR SHOULD KNOW," 16 pages, 45 poems of war, love and patriotism, including the immortal poem, "In Flanders' Fields," by McCrae, and several answers to its challenge. Price, 10 cents a copy, three for 25 cents. The Medical Herald and Electro-Therapist, Ridge Building, Kansas City, Mo.

BARGAINS IN ELECTRICAL APPARATUS—Victor No. 1, complete D. C. with stand, $100. Thompson-Plaster cabinet, slightly used, model E, good as new, $300. Time payments to responsible parties. Address "Electric," The Medical Herald and Electro-Therapist, Kansas City. Mo.

OFFICE EQUIPMENT FOR THE DOCTOR. Tables, Chairs, Cabinets and Physicians' office accessories. New and second hand. Write for latest Bulletins. Please mention CLINICAL MEDICINE. W. D. Allison Co., Indianapolis, Ind.

NURSES' TRAINING. DO YOU KNOW OF young ladies who would like to earn from $18.00 to $25.00 a week while studying to become graduate nurses? Send for information to The Illinois Post Graduate and Training School for Nurses, Chicago, Ill.

FAYETTE ABDOMINAL SUPPORTER—NO RUBber, No Whalebone, No Leather. This patented supporter is built of pure linen mesh, comfortably elastic and easy to wash, without lessening its term of service. For pendulous abdomen, floating kidney. sagging stomach, maternity cases and all weakened conditions of the abdominal muscles. No irritating downward pressure; no adhesive strips to lift organs; the supporter does the lifting. Write for catalog containing complete description, price list and measuring blanks. Southern Surgical Company, Box 5, Lexington, Kentucky.

HIGH TENSION. FOR YOUR HIGH TENSION cases use Natrium Compound. Reduces pressure with tonic for heart muscle preventing shock. Special trial offer 200 for $1.00. One time only. Mention CLINICAL MEDICINE. The Drug Products Co., 48 West 4th St., New York City.

GETTING AHEAD. A FASCINATING STORY OF a man who accumulated $10,000 in ten years. Free. Address Kriebel & Co., Chicago, mentioning CLINICAL MEDICINE.

FOR SALE—EXCHANGE AND WANT ADS PULL results in CLINICAL MEDICINE. Rate eight cents a word. Send copy to Advertising Department fifteen days in advance of date of publication.

A YOUNG, NEAT APPEARING VETERINARIAN, age 29, desires connection with a firm that offers a future to one who possesses ability and pep. Either on the road or inside. Address No. 1132, care A. J. of C. M.

WANTED—LOCATION OR PARTNERSHIP IN small growing town. South Florida preferred. Have for sale $4,000.00 practice. 5 room house and small drug store, reason given. H. C. Storcell, Clopton, Ala.

FOR SALE—PAYING DRUG STORE, GOOD Southwest Texas County seat town; Bermuda onion, irrigation district. Invoice $3,000. Good location for doctor. Central Pharmacy, Carrizo Springs, Texas.

SALINE, SALITHIA AND AROMATIC CHLORAZENE POWDER. Samples free. The Abbott Laboratories, Chicago.

DOCTOR: DO YOU KNOW YOU CAN

THE IODUM-MILLER CO.
KANSAS CITY MO. U.S.A.
SPECIALIZING SOLUBLE IODINE COMBINATIONS

MEET EVERY CASE OF SEPSIS

Whether Local or Systemic
By the Use of One or Other of Our Soluble Iodine Products? Send for Literature No. 175

Woodlawn Maternity Home

A strictly private and ethical Home Retreat for unmarried girls and women during pregnancy and confinement, with best medical care, nursing and protection. A home found for the infant by adoption if desired. All publicity avoided. Prices reasonable. For particulars, prices and terms, address
WOODLAWN, OWEGO, Tioga Co., N. Y.

CLEAN TEETH-FIRMS GUMS
HEALTH

The chief cause of disease is infection. The main source of infection is the teeth. To prevent infection use

Dr. R. B. Watts ANTI-PY-O DENTAL CREAM

Gout, Rheumatism, Heart Trouble and Stomach disorders are caused by infection

Retail, 30 cts. a tube
Wholesale, $2.50 a doz.

THE ANTIDOLOR MFG. CO.
12 Main St., Springville, N. Y.
SEND LARGE TUBE FREE
Name.....
Address.....

The "Old Dependable"

Where no other food can be retained by the patient

BOVININE

THE RECONSTRUCTIVE TONIC

is readily retained and digested. For over 30 years this prompt, active food tonic has been used successfully.

SAMPLES** and list of cases and references by successful scientists **ON REQUEST.

THE BOVININE COMPANY, 75 West Houston St., New York

Debility can best be combated by giving a food-tonic that assures its own digestion and assimilation without taxing the flagging resources of a depleted and run-down body. Sanatogen—a new chemical compound of milk-protein and sodium glycerophosphate—is just such a food-tonic. Its use in the treatment of debility from any cause, but especially of anemic and chlorotic patients, is known to be followed by rapid restoration of the metabolic balance and vital forces on which their health and well-being depend.

Samples and Literature on Request.

THE BAUER CHEMICAL CO., Inc.
115 West 18th Street, New York.

FOOD-TONIC

Sanatogen

Business Opportunities Continued

FREE. A SAMPLE OF BORCHERDT'S MALT Soup-Extract, a standard American product for preparing Malt Soup, non-alcoholic. Send for a Free sample and literature. Address The Borcherdt Malt Extract Co., 221 N. Lincoln St., Chicago, Ill., and kindly mention Clinical Medicine.

FOR SALE—DR. POLLARD'S HIGH TENSION Stethoscope. A scope with which you can hear the heart sounds through an overcoat, coat, and vest. Try it a week. Money back if not satisfied. Price $6.00. Address, mentioning Clinical Medicine, Dr. John D. Pollard, 2755 Jackson Blvd., Chicago, Ill.

SUPPORTERS WASHABLE—ABDOMINAL-MADE after the suggestions of the late Dr. John B. Murphy. Send for illustrated folder, measurement order blanks, samples of materials, and prices to the Ambulatory Pneumatic Splint Co., 30 (C) E. Randolph St., Chicago. Please mention this journal.

FREE—SEND FOR A FREE SAMPLE FOUR-OUNCE package of Thoro Skin Cleanser. You will be delighted. Please mention Clinical Medicine. Address The Thoro Corporation, 225 W. Huron St., Chicago.

FOR SALE—THE ULTIMA NO. 3 SINUSTAT. New special terms to Clinical Medicine readers. The Ultima Physical Appliance Co., 136 W. Lake St., Chicago, Ill.

ON APPROVAL—VOLUME NO. 1 OF THE POPULAR Year Book series. Volume No. 1 is devoted to General Medicine and is edited by the eminent Doctor Billings. For coupon see first page on insert.

FORM A CLINICAL CLUB—SEE MOTION PICtures of the latest operations by eminent surgeons. Details on request to The Clinical Film Co., 110 W. 40th St., New York, N. Y. Please mention Clinical Medicine.

DIAGNOSIS DE LUXE—THE BEST ELECTRO diagnotic set in the world is the Cameron Electro-Diagnostoset. Five instruments for different purposes. Complete with Potential Reductor, Unit Battery, and extra cord—$60.00. Literature on request. Please mention Clinical Medicine.

When, a few years ago, Sir Almroth Wright said that the physician of the future will be an immunizator, his assertion was disputed violently by many physicians to whom the idea of bacterin and serum treatment is abhorrent—mainly, it is to be feared, because they do not understand it. Now, please keep your seats, gentlemen. There are a great many physicians to whom the theory of bacterin treatment is by no means clear, and those who have studied it carefully for years still find many things to puzzle them.

Nevertheless, it is one of the best bets that the physician has at his disposal in conditions with an underlying infection. The point is, to select the suitable bacterin for a given condition of illness. These results follow with almost mathematical certainty.

Naturally, one of the important conditions is, that the bacterin shall be well made, the active cultures properly counted and standardized. The bacterins prepared by The Abbott Laboratories are right. So is the literature that this firm puts out regarding its products and so is also the new all-glass hypodermic syringes by means of which the "shots" are administered. Write and ask about these things, Doctor, and get some valuable information.

If You Actually Owned Mudlavia

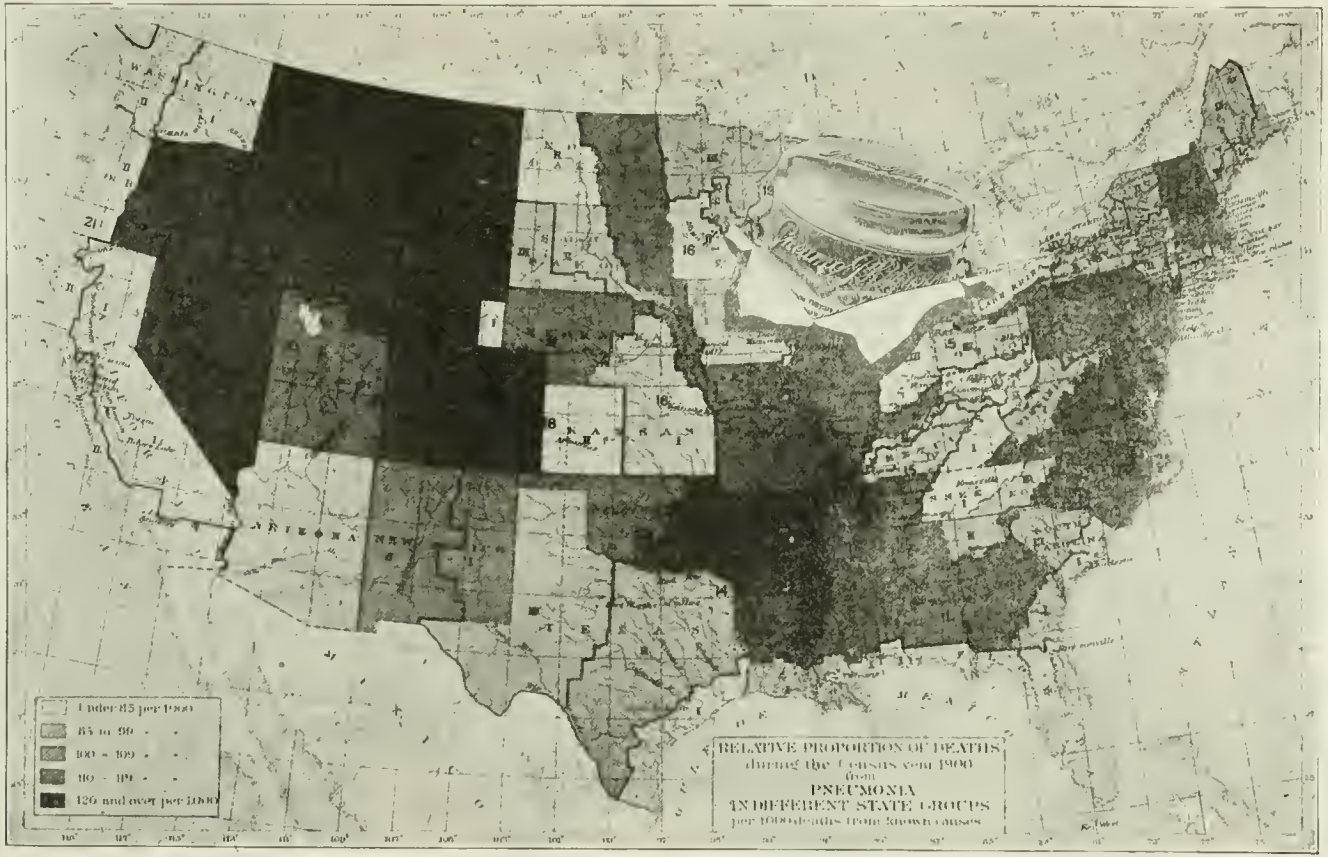
Your patients could not have more individual care or better service. Mudlavia cooperates with the home physician to the minutest detail.

We are always pleased to entertain physicians at Mudlavia and to furnish opportunity for fullest investigation as to methods and success of treatment. For physician's invitation card, address

W. C. KRAMER, Gen. Mgr. Mudlavia, KRAMER, IND.

Our Railroad Station is Attica, Indiana

Have you a copy of our "Blue Book for Physicians?"


Under 85 per 1000
85 to 90 - - -
90 - 100 - - -
100 - 110 - - -
110 - 120 - - -
120 and over per 1000
RELATIVE PROPORTION OF DEATHS
during the Census year 1900
from
PNEUMONIA
IN DIFFERENT STATE GROUPS
per 1000 deaths from known causes

A preparation in point that has proved its claim to the high consideration of Physicians many times, is PNEUMO-PHTHYSINE, which consists of Creosote, Guaiacol, Metbyl Salicylate, Quinine in a vehicle of Kaolin. PNEUMO-PHTHYSINE makes an acceptable "poultice" for cleanly application. Its analgesic and antifebrile action is marked and the results from its use often are surprising. PNEUMO-PHTHYSINE is one of the worth-while proprietaries on the market and one that well repays careful investigation by every Physician.

PNEUMO-PHTHYSINE CHEMICAL COMPANY

220b West Ontario Street, **CHICAGO, ILLINOIS**

WHEN YOU PRESCRIBE
"A Saline Laxative"

Specify —
"Abbott's Saline Laxative"

MILD " THOROUGH " PLEASANT

Results Guaranteed by 25 Years Experience

TAUROCOL TABLETS

(TOROCOL)

Torocol is a combination of bile salts, extract of cascara sagrada, phenolphthalein and aromatics.

TAUROCOL COMPOUND TABLETS (TOROCOL)

With Digestive Ferments and Nux Vomica

Manufactured exclusively for physicians, prescriptions and dispensing. Complete formula, samples and literature on request.

THE PAUL PLESSNER COMPANY, DETROIT, MICH.

THE NERVOUS TRIALS OF THE MENOPAUSE
so full of distress to the patient and concern to the physician, are satisfactorily met by

PASADYNE
(DANIEL'S CONCENTRATED TINCTURE OF PASSIFLORA INCARNATA)

which secures for the woman stability of the nervous system and enables her to go through this period in fairly serene comfort. POTENT - SAFE - AGREEABLE -

IT HAS NO CONCERN WITH THE HARRISON ACT

SAMPLES AND LITERATURE SUPPLIED TO PHYSICIANS PAYING EXPRESS CHARGES

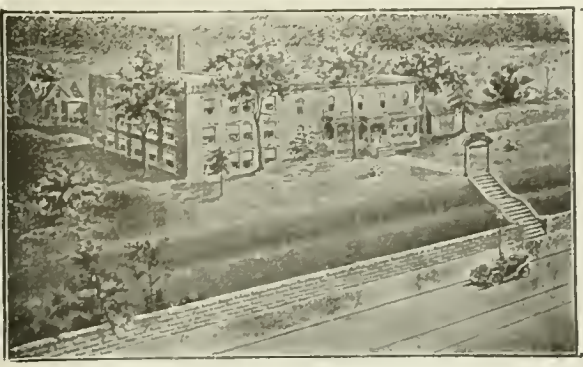
LABORATORY OF JOHN B. DANIEL, INC., ATLANTA, GEORGIA

"GETTING AHEAD"

is the fascinating story of a man who accumulated $10,000 in ten years, by systematic investing in high-grade listed stocks and bonds. Amount invested averaged $25 monthly. "Getting Ahead" contains nothing for the man who wants to get rich in a hurry, but will be helpful to all who wish to save from $5 to $100 monthly and invest by a safe method.

We sell all high-grade stocks and bonds listed on the New York Stock Exchange and other reliable exchanges, on convenient monthly payments. Send for "Getting Ahead." It explains the plan.

KRIEBEL & CO.
INCORPORATED
Investment Bankers
145B South La Salle Street, Chicago



The Willows Maternity Sanitarium

A high-grade ethical home and hospital for unfortunate young women. Patients accepted any time during gestation. Adoption of babies when arranged for.

Prices reasonable. Write for 80-page illustrated booklet.

THE WILLOWS
E. P. Haworth, Supt. 2925-29 Main Street
KANSAS CITY, MO.

THE RESORPTION OF SYPHILITIC DEPOSITS

In the effort to bring about resorption of syphilitic deposits—or other manifestations of the late stage of syphilis—the clinician will find

IODIA
(BATTLE)

A POTENT WEAPON

The superior features of **IODIA** (Battle) are its powerful alterative action, its active iodine content, and the ease with which the patient tolerates its continued use.

BATTLE & Co., Chemists' Corporation, St. Louis

A Check In The Hand

Is Better Than A Bill On The Books

The doctor deserves to collect every cent that he earns. But he doesn't. Unassisted he cannot. He needs our help, because without subjecting him to annoyance or arousing antagonism against him, we can collect any bill that is not absolutely in the D. B. class—and some that are!

Are you interested, Doctor?

If you are, fill in the coupon, cut out, and mail it to us.

The Hoosier Mercantile Agency,
552 Tribune Bldg.,
Warren, Ind.

Send me full particulars regarding your collection service.

.....

.....

.....

The Hoosier Mercantile Agency

552 Tribune Bldg.

Warren -:- Indiana

A Nourishing Food Easily Digested

Borden's Eagle Brand Condensed Milk for infant feeding contains all the nourishment of pure milk—the proteins that build and sustain bodily growth and well being, as well as the fats, carbohydrates and mineral salts that are necessary for robust health and proper resistance against infection and disease.

Borden's Eagle Brand contains only pure milk and sugar condensed together. It is easily digested and assimilated by delicate children and may be used with perfect assurance as a supplementary food during the nursing period or as a complete diet when Nature's food fails.

Samples, analysis and literature on request.

THE BORDEN COMPANY
Established 1857
Borden Building New York

Borden's
EAGLE BRAND

No Unbroken Food Cells

Steam-Exploded Wheat

Here is whole wheat, fitted, as never before, for easy, complete digestion.

The grains are steam-exploded — shot from guns. They get an hour of fearful heat — 550 degrees. The moisture in each food cell is thus changed to steam.

When the guns are shot, that steam explodes. Each of the 125 million food cells is exploded separately. Thus every granule of the whole wheat is fitted to easily digest.

Ordinary cooking breaks but part of the food cells. This method breaks them all.

Puffed Rice is whole rice puffed in like way. Corn Puffs are pellets of hominy puffed.

Where ease of digestion must be considered, these are the ideal grain foods. They are also the most delightful grain foods that anyone ever tasted.

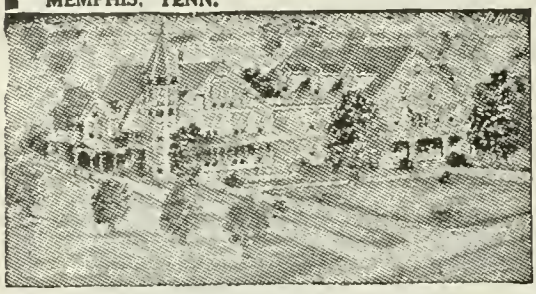
The Quaker Oats Company
Chicago

Puffed Wheat
Puffed Rice
Corn Puffs

3283

PETTEY & WALLACE SANITARIUM

958 S. Fifth Street
MEMPHIS, TENN.



FOR THE TREATMENT OF

Drug Addiction, Alcoholism, Mental and Nervous Diseases

A quiet, home-like, private, high-class institution. Licensed. Strictly ethical. Complete equipment. Best accomodations.

Resident physician and trained nurses.

Drug patients treated by Dr. Pettey's original method.

Detached building for mental patients.

OXFORD RETREAT

A private hospital for Nervous and Mental Diseases, Alcoholic and Narcotic Inebriety. Incorporated 1883. Separate departments for men and women. Careful attention to proper classification, every convenience and any accommodation desired. Facilities unsurpassed. Electricity, Hydrotherapy and Massage. Site elevated, retired and beautiful. Ninety-six acres in lawn and forest.

THE PINES

A Neuropathic Hospital for women only. Mental cases not received in this building. First class in all its appointments. Under the same control and management as the Oxford Retreat. Thirty-nine miles from Cincinnati, eighty-four miles from Indianapolis, on C. H. & D. R. R.; ten trains daily.

For references, terms and descriptive circular, address

R. HARVEY COOK
Physician-in-Chief OXFORD, BUTLER COUNTY, OHIO

Nurses Supplied for All Kinds of Cases

NURSES ARE NEEDED

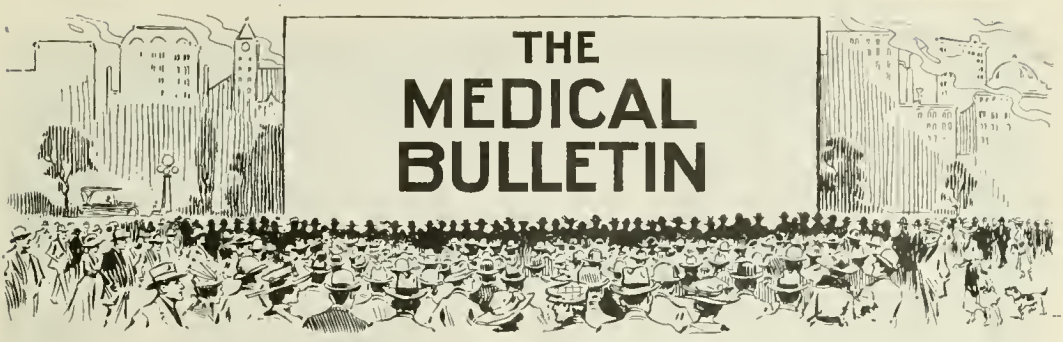
Telegraph or Telephone LINCOLN 2155

Our Students Receive $18 to $25 per week While in Training on Private Cases. Graduates $35 to $45.

TWO YEAR HOSPITAL, CLASS AND PRIVATE CASE TRAINING.

Write Dept. K for Free Booklet—"The Doctor and the Nurse."

ILLINOIS POST GRADUATE AND TRAINING SCHOOL FOR NURSES
546 Garfield Avenue, Chicago, Illinois



Pertinent Paragraphs for Physicians. Quickly Read and Easily Digested

What is Cinchophen?

Cinchophen, Abbott, is Phenylcinchoninic Acid, introduced as Atophan, under which name it secured wide popularity among the medical profession. Cinchophen, Abbott, has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association and was ordered in large quantities during the war by the United States Government.

Cinchophen, Abbott, stimulates the kidneys so as to increase the amount of urine and has a selective action on the excretion of uric acid, which is increased in greater ratio than the increase in the amount of urine. Cinchophen, therefore, effects a reduction of the uric acid content of the blood.

Cinchophen, Abbott, is useful wherever it is desirable to increase the flow of urine and the excretion of uric acid. Indications for its uses are gout, rheumatism, sciatica, neuritis and gonorrheal joint disease. In gouty conditions it is generally admitted to be the remedy of greatest value.

The Seriousness of Sleep

Every doctor has seen how wakeful nights wear out a patient's strength and how a few hours of sound, refreshing slumber change the patient from a nervous wreck into a cheerful, reasonable human being.

Many remedies have been used for the induction of sleep, but most of them have been superseded by Barbital, or, as it was formerly known; Veronal. This remedy is efficient, it is nearly free from depressant action, and, under normal conditions it does not induce habit formation. So important is this remedy that when German Veronal was unobtainable in this country, several American manufacturing houses were asked by the United States Government to undertake the problem of its manufacture. The Abbott Laboratories was one of these, and, working under great difficulties, it was able to produce large quantities of it for the American government for our soldiers and sailors, and it is now manufacturing Barbital of the best quality in quantities large enough to meet the civil demands. Specify Abbott's when prescribing Barbital.

Coughs and Colds Yield to Calcidin

January Suggestions

Good work; good drugs, larger practice. Better fees. Closer collections.

The ideal antiseptic for everyday use—Doctor Dakin's Chlorazene.

Dr. Wm. H. Wilcox, in The Lancet, advocates the more extensive use of bile salts therapeutically. Try Bilein (Abbott) in your cases of jaundice and as an adjuvant in the treatment of Cholelithiasis.

Are you using Bacterins? Get the Abbott Price List.

Digipoten (Abbott) is the American-made Council-passed, digitalis preparation. Try it.

Can you clean a wound with soap? Neutral Sodium Soap (Abbott) is non-irritating and does not injure the skin.

Convenient branch offices are maintained by The Abbott Laboratories in New York City, 31 E. 17th St.; Seattle, 225 Central Bldg.; San Francisco, 371 Phelan Bldg. Also agencies in Los Angeles, Calif., Toronto, Canada, and Bombay, India. Wholesale druggists and the retail trade are also stocked with Abbott specialties.

If you haven't the complete Price List of The Abbott Laboratories, send for one now, using the corner coupon below. Ask also for special bulk quotations on anything you want.

(Coupon)

The Abbott Laboratories, Dept. 95,
Chicago, Illinois.

Please send me your complete up-to-date Price List. Also bulk quotation on.....

.....

.....

.....

Dr. .....

Address .....

WE BRING THE CLINIC TO YOU

Surgeons travel hundreds of miles to attend famous clinics. We bring these Clinics to you through the CLINICO MOTION PICTURES. These pictures provide a Close, Uninterrupted view of the operations in all their TECHNICAL MINUTIAE. Every step in the procedure—every detail in technique is clearly and continuously portrayed, greatly enlarged, and amplified by charts, legends and titles. You see more than if you were standing at the very edge of the operating table itself. There are wonderful educational opportunities in our CLINIC MOTION PICTURES made by eminent surgeons and recognized authorities in the medical profession.

Clinical Pictures add a vital interest to Medical Society meetings and are invaluable for college and Post Graduate Work.

A Large Variety of Clinical Subjects Are Now Ready. You Select from Our Film-Library Catalog, Which We Will Send on Request, the Operations You Want to See. The Films Will Be Sent To Any Part of the United States at a Slight Rental Cost.

Clinico Clubs are now Being Organized.

Send For Details

THE CLINICAL FILM COMPANY, 110 W. 40th St., New York, N.Y.

DOCTOR you may have a MONTHLY INDEX-MEDICUS

(The on*ly* one published)

and Two Good Medical Journals

FOR ONLY **$2.00** A YEAR

"Witchery"

FOR A LIMITED TIME we will furnish

The Medical Review of Reviews (including the Monthly Index-Medicus) and

The Medical Herald, both for $2.00 a year, including a copy of this artistic pose, in size of frame. 100 different pictures to choose from, one with each year's subscription. Send your name today. Fin a $2.00 bill to this ad. Write plainly. Ask for "Good Things to Come," a list of the important original papers shortly to appear exclusively in the MEDICAL HERALD and ELECTRO-THERAPIST. 536 Ridge Building, Kansas City, Mo.

Add 25c for Canada, 50c for foreign postage.

N. B.—Add 25c (in stamps) if you desire a copy of "The Sex Life," by Mary Ware Dennett.

For Your High Tension Cases

Pulvoids

Natrium Compound

(High Tension Dr. M. C. THRUSH)

Special Sugar Coating, Green Color

Potassium nitrate, Sodium nitrite, Sodium bicarb., Nitroglycerin and Crataegus oxyacantha.

The best known pressure-reducing agents with tonic for heart muscle, preventing shock. Made to disintegrate in the intestinal tract, avoiding gastric disturbances.

Many physicians declare they give such prompt and positive results as they cannot get from other methods of treatment.

Special Cash-with-order Trial Offer to Physicians and Hospitals Only

200 for $1.00, one time only, or 1,000 for $5.00 on 60 days' trial, money back if not satisfied. Trade pkge., 100 for 75 cents.

Literature sent on request

If you dispense, ask for our Price List.

THE DRUG PRODUCTS CO., Inc.

48-52 West 4th St. New York

PYORRHOCIDE
POWDER
(Antiseptic)

Medicated Dentifrice

For prevention and treatment of

PYORRHEA

For the correction of

SOFT, BLEEDING, SPONGY RECEDING GUMS

Cleans and Polishes the Teeth.
PROMOTES AND MAINTAINS TOOTH, GUM & MOUTH HEALTH

FREE Samples of Pyorrhocide Powder and copy of "Causes and Effects of Pyorrhea" mailed on request.

The Dentinol & Pyorrhocide Co., Inc.
1480 Broadway New York

FOR RELIEVING
PAIN
there is no remedy more serviceable, effective and safe than

PHENALGIN

No matter how severe or where located, pain is promptly and satisfactorily controlled by this dependable anodyne—and without disturbing the digestion, suppressing the secretions, causing constipation or inducing a drug habit.

This is why Phenalgin has largely supplanted opium and other habit-forming drugs for relieving **Headaches, Rheumatism, Gout, LaGrippe, Lumbago, Neuralgia, Disorders of the Female, Dysmenorrhea, and Painful Conditions generally.**

Thousands of physicians have been using Phenalgin in place of any other analgesic for a quarter of a century. Phenalgin does not require Harrison narcotic blanks or special record.

Phenalgin is sold in 1 ounce bottles containing either powder, 5 grain tablets or Pink Top Capsules.

Samples on request

THE ETNA CHEMICAL CO.
59 Bank Street New York

Confidence Begets Confidence

Our own belief in the potency of "WESTERFIELD'S TINCTURE DIGITALIS TABLETS" has shown us that we have contributed something to the medical profession of America in which we take just pride.

And in this belief, which is strengthened every day by voluntary testimony from all parts of the country, congratulating us on the enterprise and achievement of an American Pharmaceutical House, we present to the Doctors of America a Digitalis product that for prompt action and speedy results leaves nothing to be desired.

Its freedom from gastric disturbance will appeal to all physicians, and in this particular field it stands supreme.

Our confidence in our Tr. Digitalis Tablet is so great that we will send liberal sample to any part of the country on request, and abide by the Doctor's decision as to its merits.

If unable to obtain from your druggist, order direct from us.

65c per 100
$2.00 for 500
$3.90 per 1,000

The Westerfield Pharmacal Company

25 E. Second St. Dayton, Ohio

In Acute Septic Infections

the best and most effective remedy is iodine—and the best and most effective form in which to administer it, is

BURNHAM'S SOLUBLE IODINE

The use of this product makes it possible to administer iodine in larger doses, and for longer and more continuous periods, ***without gastric irritation or other ill effects,*** than any other preparation of iodine.

This is the secret of the remarkable results that medical men obtain from the use of Burnham's Soluble Iodine in the treatment of acute septic processes.

For interesting literature on the Successful Use of Iodine, address

Burnham Soluble Iodine Co.
Auburndale, Mass.

Announcing

the Production of

Pneumo-Strep-Serum

(Antipneumococcic and Antistreptococcic Serum)

Reports from Army Camps indicate that the streptococcus hemolyticus and other streptococci are frequently associated with pneumococci as causative factors in pneumonia. When it is determined that the pneumonia is complicated by the streptococcus, the conjoint use of Antipneumococcic Serum Polyvalent and Antistreptococcic Serum Polyvalent is indicated.

Injecting Cultures into Serum-Producing Horse

The Difficulties and Inconvenience of separate injections of Antipneumococcic Serum and Antistreptococcic Serum may be avoided by using **Mulford Pneumo-Strep-Serum,** which is prepared by injecting horses simultaneously with the fixed types I, II and III of pneumococcus, also some strains from group IV pneumococcus, and 15 key strains of streptococcus.

Pneumo-Strep-Serum, therefore, possesses the combined advantages of antipneumococcic and antistreptococcic serums. It contains antibodies against all the various strains of pneumococcus and streptococcus employed, and, by standardization against type I pneumococcus, it is equally as potent against type I pneumonia as the type I and polyvalent antipneumococcic serums.

An injection of 100 mils Pneumo-Strep-Serum is equivalent to 100 mils Antipneumococcic Serum and 100 mils Antistreptococcic Serum.

MULFORD FOR THE CONSERVATION OF LIFE LABORATORIES

Supplied in 50-mil packages, with the Mulford perfected Intravenous Apparatus.

H. K. Mulford Company, Philadelphia, U. S. A.

42112

Mulford

BOOK BARGAINS

THE PRACTICE OF MEDICINE

By W. F. Waugh, M. D. and W. C. Abbott, M. D.

Larger than any previous edition. Over 1,000 pages. Beautifully bound in cloth, gold-lettered. Price, $5.00. Cash with order. Delivery charges prepaid. Money back if not satisfied. Only 200 copies left. Order now.

EVERY-DAY DISEASES OF CHILDREN AND THEIR RATIONAL TREATMENT

By Geo. H. Candler, M. D.

A wonderfully practical aid to the general practitioner in diagnosing correctly and skillfully treating the diseases of infancy and childhood. 150 Chapters, 432 pages, cloth-bound. Price, $1.00. Cash with order. Delivery prepaid. Money back if not satisfied.

ABBOTT'S FEDERAL NARCOTIC RECORD BOOK

A daily record of narcotics dispensed or distributed. It fits the pocket. Price, cloth binding, 25 cents; leather binding, 75 cents.

EVERY BOY'S BOOK (Butler)

Regular price, $1.00. Special price, 50 cents. Teaching in a simple and practical way, sex facts for young boys.

STORIES OF A PHYSICIAN DETECTIVE (Butler)

Regular price, $1.00. Special price, 50 cents. A fascinating book, telling of the exploits of "Dr. Burnivall" in the realms of psychology and hypnotism.

STORIES OF A COUNTRY DOCTOR (King)

Revised Edition. Regular price, $1.00. Special price, 50 cents. An entertaining account of the active experiences of a pioneer western doctor.

MORE BACKBONE (Clough)

War Edition. Price, 25 cents. A companion book to Backbone.

OL' DOC LENT AND OTHER POEMS (Rose)

Regular price, $1.00; Art Binding; special price, 25 cents. This collection of verses by Dr. Frank L. Rose, the poet physician, is unique in its special interest to medical men.

BACKBONE (Clough)

80 pages. Paper, 50 cents. Leather, $1.00. A bouncer for the blues. Hints for the prevention of jelly-spine curvature and mental squint, an antidote for the blues and a straight-ahead cure for grouch. Just the thing for the doctor's reception-room table.

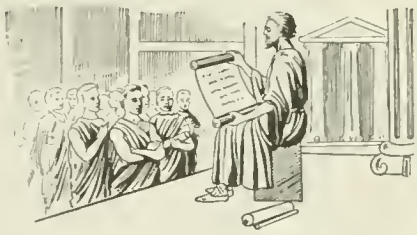
EVERY GIRL'S BOOK (Butler)

Regular price, $1.00. Special price, 50 cents. Sex facts for young girls. An exceedingly valuable book for the purpose intended.

We can supply you promptly with any medical or surgical work published in the United States. Make us your headquarters for book orders and save delivery charges. Our terms: Cash with order, delivery charges prepaid.

Address

CLINICAL MEDICINE
Book Dept.
4757 Ravenswood Avenue
CHICAGO, ILL.



Hippocrates

The father of medicine lived about 400 B. C. and belonged to a family that had for generations practiced the healing arts. In his time he established an important reform in experimenting for speculative theories.
Had Hippocrates the opportunities of the twentieth century it is safe to say his experiments would have convinced him of the value of a saline aperient, such as Pluto Water, in the treatment of kidney, liver and stomach troubles, rheumatism and nervous disorders.

PLUTO

FRENCH LICK SPRINGS HOTEL CO.
FRENCH LICK, INDIANA

Hydroleine

An ethical emulsion of cod-liver oil without medicinal admixture.

The manner in which the purest and freshest cod-liver oil is emulsified in Hydroleine, makes it easily digestible. Furthermore, Hydroleine does not offend the taste. Its nutty and distinctive flavor is liked by the most delicate palate, and children take it willingly.

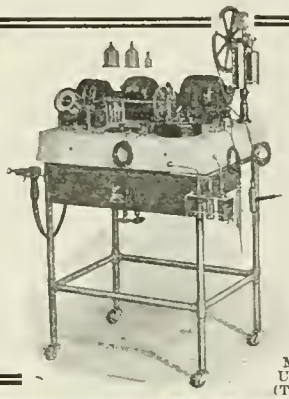
In practice it is markedly utilizable, and is reliably stable. It is effective as a food-fat and possesses superior characteristics.

In Long-continued Professional Use Hydroleine Has Proved Its Dependability

Century National Chemical Co.

Successors to
Charles N. Crittenton Co.
46 WEST BROADWAY, NEW YORK
Sold by druggists

Sample sent to physicians on request.



McIntosh Universalmode (Trade Mark)

FREE "ELECTRO THERAPEUTICS CONDENSED"

A handy manual containing the latest clinical data on electro-therapeutical treatment and shows where the use of this modern agency is indicated. Also shows the very latest development in electro-therapeutical apparatus.

IT TELLS YOU WHY **The Universal Mode Is Supreme**

Galvanic, Faradic, Sinusoidal, Cautery, Vibration, Air Diagnostic Light IN THEIR HIGHEST EFFICIENCY.

THE RESULT OF OVER FORTY YEARS OF EXPERIENCE AS MANUFACTURERS OF ELECTRO-THERAPEUTICAL AND X-RAY APPARATUS.

Your copy of "Electro Therapeutics Condensed" is reserved. Where shall we address it?

McINTOSH BATTERY & OPTICAL CO.

Eastern Office and Service Station, 1777 Broadway, New York.

Main Office and Factory, 217-223 N. Desplaines St., Chicago, Ill.

ARHÉOL

(C15 H26 O)

THE ACTIVE PRINCIPLE OF SANDALWOOD OIL

Used with conspicuous success in

Gonorrhea, Cystitis, Vesical Catarrh, Etc.

DIRECTIONS: 10 to 12 capsules daily

For samples and literature address

ASTIER LABORATORIES
45, Rue du Docteur Blanche, Paris, France

E. FOUGERA & CO.
90 Beekman Street, New York

THE SAFEST, SUREST, AND MOST RELIABLE

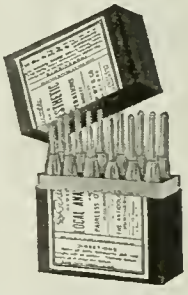
Dr. R. B. Waite's

Antiseptic Local Anaesthetic for INFILTRATION and NERVE BLOCKING

Whether you want to extract a tooth, remove a pulp, excavate, or any other dental operation, you want to do it with the least discomfort to your patient. Absolutely painless work, with no ill after effects, is insured by Dr. R. B. Waite's.

ORDER OF YOUR DENTAL DEPOT

1 oz. $0.80; 12 ozs. $8.40; 50 ozs. $30; 100 ozs. $55.
1 box 1½ cc. Ampules (12 to box), $0.80; 12 boxes, $8.40; 50 boxes, $30; 100 boxes, $55.
1 box 2½ cc. Ampules (12 to box), $1.00; 12 boxes, $10.20; 50 boxes, $37.50; 100 boxes, $70.
1 box 3 cc. Ampules (10 to box), $1.00; 12 boxes, $10.20; 50 boxes, $37.50; 100 boxes, $70.



THE ANTIDOLOR MFG. CO., Main Street, Springville, Erie County, N. Y.

Acetanilid
Acetphenetidin

Bromides
Bismuth Salts

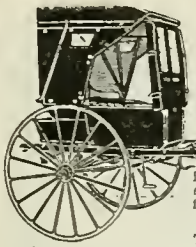
Chloral Hydrated
Cocaine Hydrochloride

Specify Merck's from A to Z

Iodides
Iron Salts

Salicylates
Sodium Salts

Zinc Stearate
Zinc Salts



Better Than the Best Buggy

In many ways, for many requirements, and at less than half the cost of a first-class buggy—the genuine

HAMMOCK CART

Thousands in use by doctors, farmers, mail carriers and others, who testify to every claim made for it. Easy riding—no horse motion. Light draft, no weight on horse's back. Built for durability, service and first-class appearance. Outwears several buggies. Goes where a buggy cannot. Pole or shafts. Top or open. Write for Book "C." Testimony and Particulars.

THE EUREKA CO., Sole Makers, Rock Falls, Ill.

Firolyptol with Kreosote

Eucalyptol	10 drops
Ol. Gossypii Sem. Purificat.	½ ounce
Kreosote (Morson's)	10 minims
Firwein, q. s.	1 ounce

Anti-Tuberculous Anti-Strumous

This preparation contains all of the desirable features of Cod Liver Oil and is more readily assimilated.

Free Sample to the Profession

THE TILDEN COMPANY

Manufacturing Pharmacists and Chemists

NEW LEBANON, N. Y. ST. LOUIS, MO.

Try the

TETRA Bandage

Elastic without rubber.

Sanitary; can be washed.

Famous in many countries.

Send for a sample strip and leaflet.

THE TETRA CO.
352 N. Clark St., Chicago

16 Miles North of Chicago

A WELL APPOINTED

SANITARIUM

Located on the shore of Lake Michigan. For the care of Convalescents, Treatment of Nervous Diseases, Insomnia, Affections of the Heart, and Disorders of the Stomach and Kidneys.

NORTH SHORE HEALTH RESORT

Complete Clinical Laboratory with modern High Frequency Outfit—Nauheim Baths—Vierz-lien Baths—Hydrotherapy—Medical Gymnastics—Massage and Electricity.

Geo. F. Butler, M.D., Med. Dir.
Address MANAGER
WINNETKA, ILL.

GOITER THERAPY (White's)

A parathyroid antibody serum, for abnormal functioning thyroid gland.
A serum with a ten-year reputation for permanent results.
Why use iodin when the thyroid secretes six other elements of importance?
Remember the abnormal thyroid more often does not enlarge.
Use White's serum for permanent reduction and function.

Originated, Manufactured and Distributed only by

MARK WHITE, M. D., V. M. D., Dr. P. H.
30 North Michigan Blvd., Chicago

Avoid Imitations of

"Horlick's"

the ORIGINAL and STANDARD Malted Milk

A BOON TO THE SMOKER

To insure clean teeth, a sweet, wholesome breath and improved apetite for breakfast, use—

R. R. Watts ANTI-PY-O DENTAL CREAM

The flavor is delicious with a twang that grips leaving mouth cool & refreshed after using

Retail, 30 cts. a tube
Wholesale, $2.50 a doz.

THE ANTIDOLOR MFG. CO.
12 Main St., Springville, N. Y.

SEND LARGE TUBE FREE

Name.....

Address.....

Sal Hepatica

THE STANDARD SALINE LAXATIVE

Samples on request

Bristol-Myers Co.
New York

The past year's experience has demonstrated the value of chemotherapy in influenza and pneumonia. The improvement and development of germicides has made possible the control of virulent cases.

CREOFOS

(Creosote with Hypophosphites, Delson)

is an effective non-poisonous germicide. It is readily assimilated when given by mouth, or can be administered intravenously. Creofos medication is especially desirable in the treatment of colds as it offers a reliable safeguard against more serious bacterial invasion.

Let us mail you complete laboratory and clinical reports.

THE DELSON CHEMICAL CO., Inc.
47 East 19th Street, New York City

Doctor

Just try GOITRE SPECIAL TABLETS on one patient and be convinced of the permanent benefits received.

Time required for treatment varies with different patients.

Goitre Special Tablets

have been thoroughly tested by the Profession and sold to Physicians only for the past six years on their merits.

Certainly your patient should have the advantage of this treatment.

1000 Tablets.....$5.00
500 Tablets..... 2.60

Manufactured by
The Columbus Pharmacal Co.
330-336 Oak Street
Columbus, Ohio

"One-Legged Therapy"

To attempt to treat Lues with arsenic alone is against reason, experience and the authority of expert clinicians. Arsenic requires the synergistic assistance of Mercury and in many cases of Iodides as well.

Arsenoven S. S. 2. Ogrammes

a combination of Dimethylarsenin (gr. 31) Mercury Biniodide (gr. 1/10) and Sodium Iodide (gr. ½) is therapeutically ideal and clinically demonstrated to be efficient, safe and economical. In ampoules only for intravenous administration which requires no preliminary preparation, entails the simplest technique, assures the most satisfactory results. Literature and price list to physicians on request.

S. S. PRODUCTS CO.
PHILADELPHIA, PA.

A NEW BOOK ON THE INTERNAL SECRETIONS

ANNOUNCEMENT is made of the early publication of a comprehensive book on the every-day aspects of the internal secretions, and organotherapy, entitled

PRACTICAL ORGANOTHERAPY

By HENRY R. HARROWER, M. D., F. R. S. M.

This new book contains a wealth of concise data on the DIAGNOSIS of the common endocrine troubles, the routine use of single as well as combined gland extracts, ORGANOTHERAPY in its many phases, and the CLINICAL THERAPEUTICS of the large class of disorders connected with disturbed function of these glands.

It contains 5 sections, Appendix, Index of Treatment and 272 pages. Cloth Bound, 8vo., to retail at $2.50, net.

A copy of the second edition will be sent to every interested physician who sends only twenty-five cents in stamps or coin to Dr. Henry R. Harrower, Glendale, California (while they last!).

? What Would You Think ?

If

A STUNTED BOY, nearly 16, who hadn't grown any for over 5 years, took some capsules and grew nearly two inches in 13 weeks?

AN EPILEPTIC CHILD, who, despite bromides, had numerous attacks daily, took some capsules for a few months, and the attacks then came only once a day?

A DEFECTIVE GIRL of 5 who had never spoken, took some capsules and in 6 months was making sentences, with other improvement?

The remedy in each of these cases was **ANTERO-PITUITARY CO.** *(Harrower)* made in this laboratory; and if these were the only results achieved—which is not the case—would it not have been worth while developing this formula?

Write for Information—No Charge

The HARROWER LABORATORY

Glendale, California

New York, 31 Park Pl. Chicago, 186 N. La Salle St. Baltimore, 4 East Redwood St. Denver, 1132 Fifteenth St.

An Ideal Antiseptic Combination

for Gargle, Mouth-wash, Nasal and Throat Sprays

Fresh solutions can be instantly prepared with measuring cap on bottle.

This new combination of CHLORAZENE, sodium bicarbonate, sodium chloride and Eucalyptol, has been an immediate success, because of its

1. Powerful Antiseptic Action.
2. Safety.
3. The Solvent Action of Sodium Bicarbonate.
4. The Cleansing Action of the Salt.
5. Pleasant Aromatic Properties.

Colds, Influenza

Doctor, try Aromatic Chlorazene Powder in colds, sore throat, infections of the mouth, gums, and nasal passages.

Use it for cuts and wounds; as a douche and application wherever a powerful, non-toxic antiseptic is indicated.

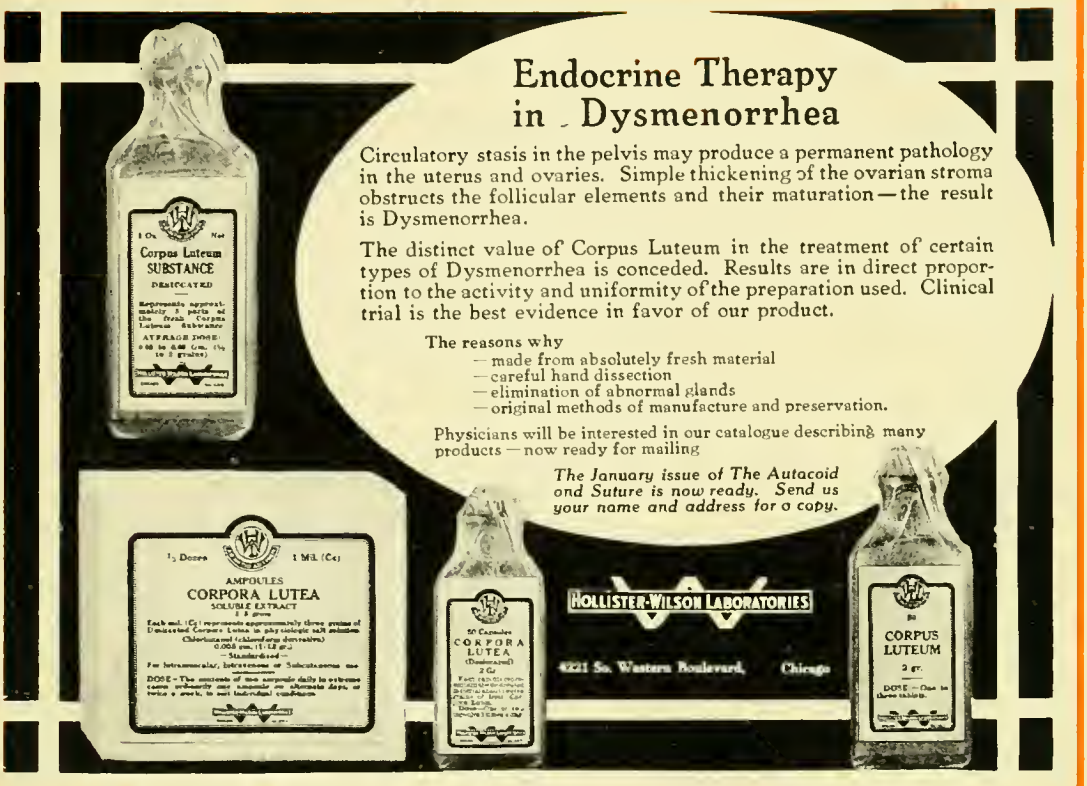
A Sample Free

Send at once for a Free sample bottle of Aromatic Chlorazene Powder for a clinical trial. You will find it a success-maker. For sale at all druggists.

The Abbott Laboratories

Home Office and Laboratories, Dept. 95
CHICAGO, ILL.

New York San Francisco Seattle
Los Angeles Toronto Bombay



Endocrine Therapy in Dysmenorrhea

Circulatory stasis in the pelvis may produce a permanent pathology in the uterus and ovaries. Simple thickening of the ovarian stroma obstructs the follicular elements and their maturation—the result is Dysmenorrhea.

The distinct value of Corpus Luteum in the treatment of certain types of Dysmenorrhea is conceded. Results are in direct proportion to the activity and uniformity of the preparation used. Clinical trial is the best evidence in favor of our product.

The reasons why
- made from absolutely fresh material
- careful hand dissection
- elimination of abnormal glands
- original methods of manufacture and preservation.

Physicians will be interested in our catalogue describing many products—now ready for mailing

The January issue of The Autacoid and Suture is now ready. Send us your name and address for a copy.

You Can't Treat A Patient Like A Test Tube!

So called "antiseptic" or "germicidal" solutions act differently upon mucous membranes than they do in vitrio.
The best antiseptic solution for mucous membranes is the normal, unimpaired secretion of that membrane.

In Cystitis
In Vaginitis
In Urethritis

ALKALOL

In the Eye or Ear
In Nose and Throat
Upon the Skin

feeds the cells with physiologically necessary salts; helps to overcome congestion, irritation and hypersecretion; restores vascular tone, and brings about a return to normal. Alkalol is hypotonic, properly alkaline, of correct salinity. Alkalol is Efficiency Plus—a trial will convince.

Literature and sample on request

The Alkalol Company

Taunton, Mass.

An Ideal Antiseptic Combination

for Gargle, Mouth-wash, Nasal and Throat Sprays

Fresh solutions can be instantly prepared with measuring cap on bottle.

This new combination of CHLORAZENE, sodium bicarbonate, sodium chloride and Eucalyptol, has been an immediate success, because of its

1. Powerful Antiseptic Action.
2. Safety.
3. The Solvent Action of Sodium Bicarbonate.
4. The Cleansing Action of the Salt.
5. Pleasant Aromatic Properties.

Colds, Influenza

Doctor, try Aromatic Chlorazene Powder in colds, sore throat, infections of the mouth, gums, and nasal passages.

Use it for cuts and wounds; as a douche and application wherever a powerful, non-toxic antiseptic is indicated.

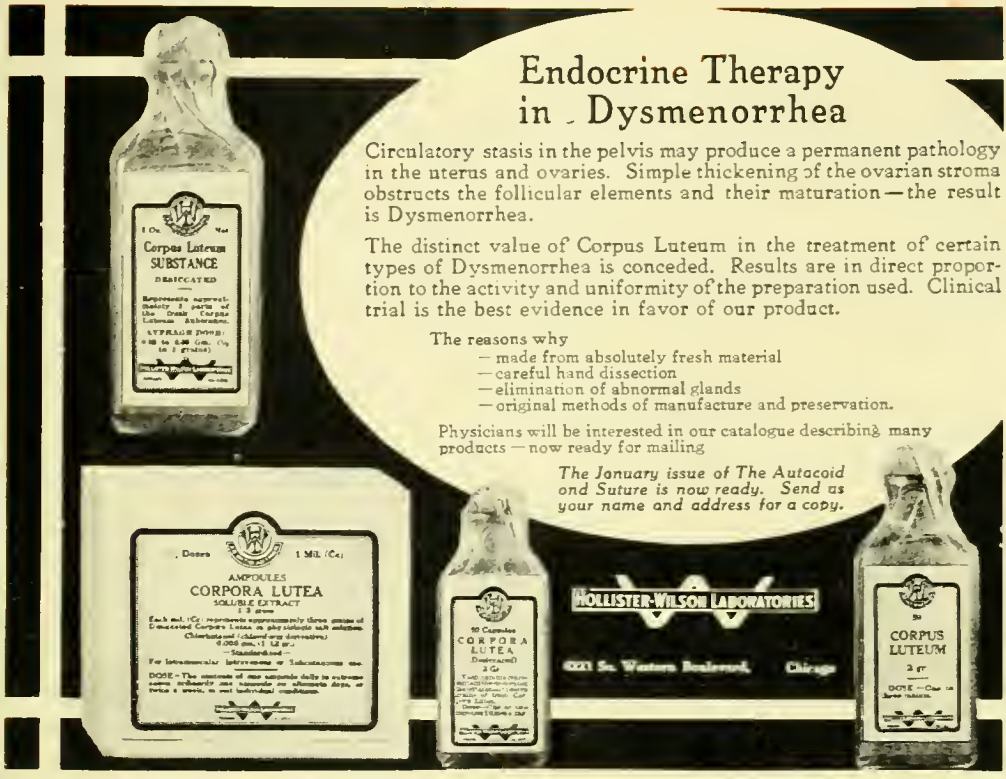
A Sample Free

Send at once for a Free sample bottle of Aromatic Chlorazene Powder for a clinical trial. You will find it a success-maker. For sale at all druggists.

The Abbott Laboratories

Home Office and Laboratories, Dept. 95
CHICAGO, ILL.

New York San Francisco Seattle
Los Angeles Toronto Bombay



Endocrine Therapy in Dysmenorrhea

Circulatory stasis in the pelvis may produce a permanent pathology in the uterus and ovaries. Simple thickening of the ovarian stroma obstructs the follicular elements and their maturation—the result is Dysmenorrhea.

The distinct value of Corpus Luteum in the treatment of certain types of Dysmenorrhea is conceded. Results are in direct proportion to the activity and uniformity of the preparation used. Clinical trial is the best evidence in favor of our product.

The reasons why
- made from absolutely fresh material
- careful hand dissection
- elimination of abnormal glands
- original methods of manufacture and preservation.

Physicians will be interested in our catalogue describing many products — now ready for mailing

The January issue of The Autacoid and Suture is now ready. Send us your name and address for a copy.

You Can't Treat A Patient Like A Test Tube!

So called "antiseptic" or "germicidal" solutions act differently upon mucous membranes than they do in vitrio.
The best antiseptic solution for mucous membranes is the normal, unimpaired secretion of that membrane.

In Cystitis
In Vaginitis
In Urethritis

ALKALOL

In the Eye or Ear
In Nose and Throat
Upon the Skin

feeds the cells with physiologically necessary salts; helps to overcome congestion, irritation and hypersecretion; restores vascular tone, and brings about a return to normal. Alkalol is hypotonic, properly alkaline, of correct salinity. Alkalol is Efficiency Plus—a trial will convince.

Literature and sample on request

The Alkalol Company

Taunton, Mass.

REST ASSURED

When the physician employs Antiphlogistine as the local adjuvant in treating pneumonia, he assists the patient to exactly what he absolutely requires—EASE and REST.

Antiphlogistine
TRADE MARK

by inducing SLEEP gives to nature that assistance which is often sufficient to carry the patient safely and comfortably over the crisis.

If you have not already received "The Pneumonic Lung" Booklet, send for one today

The Denver Chemical Mfg. Co.

NEW YORK